Lancaster, James Mansfield

A COMPARISON OF STATEWIDE PUBLIC HIGHER EDUCATION AGENCIES

The University of North Carolina at Greensboro ED.D. 1985

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A COMPARISON OF STATEWIDE PUBLIC HIGHER EDUCATION AGENCIES

by

James M. Lancaster

A Dissertation Submitted to
the Faculty of the Graduate School at
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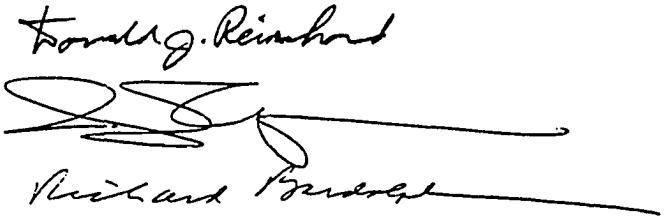

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This study examined the relation of statewide coordination agencies' control functions to the outputs of state systems of higher education in Virginia and North Carolina. The Council of Higher Education for Virginia, a coordinating agency with regulatory authority, and the Board of Governors of the University of North Carolina system, a governing board authority, represented the two most frequently chosen agency forms of statewide coordination for higher education.

Data were collected for the years 1967 through 1982, inclusive of the period betwen 1972 and 1974 when these agencies were established in the two states. Data were based on inputs and outputs theorized from institutional operations under the supervision of the statewide agencies.

Major findings included the unreliability of quantitative historical data from institutions of higher learning in the two states due to variations in measurement and collection techniques. Statistical summaries of these data which could be provided suggested that differences in the outputs of the institutions, were reflective of intended outcomes of the statewide agency decision making process.

It was found that the cost of administrative operations for these agencies appears to increase in proportion to the

extent of centralized control they exercise.

Three findings were put forward as hypotheses for future research involving evaluation of statewide agencies based on:

1. the extent to which these agencies encourage vitality or exchange with the environment among constituent institutions;
2. the extent to which control authorities at the statewide agency level assume responsiblity for ultimate decisions in eduational systems;
3. the ability of individual institutions within statewide agency systems to foster the environment of goal consensus among those charged with the delivery of educational human services.

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CHAPTER I

INTRODUCTION

Public higher education in the United States, from modest beginnings, evolved slowly until the period following World War II. At that time, the return of veterans seeking jobs and educational skills, the new found emancipation of women from more traditional roles in the home, and the post-war "baby boom" of the fifties all combined as forces creating a renewed demand for higher education on a scale previously not experienced in the nation.

To meet these social pressures and the growth in enrollments which they seemingly foretold, existing public colleges and universities began expanding curriculums and facilities, new faculties were hired and new campuses created.

Growth became synonymous with progress. Minor changes in the fundamental structure and assumptions regarding the role of colleges and universities were accommodated in an atmosphere of public acceptance and social stability for these institutions. Widespread social changes in the sixties brought drastic shifts in these popular perceptions of public colleges and universities. In his 1962 The American College and University: A History Frederick Rudolph asserted "The problem of numbers was not a problem

of numbers alone; it was also a matter of purpose." But Rudolph was writing to describe the zenith of American higher education's growth. Shortly after this time came the deluge and with it the questioning of purpose again. Much of the questioning of long held values which gave force to these unsettled years seemed to emanate from campuses. Taxpayers, parents, and political leaders began to question the value of their investments in higher education. Present day questions concerning control of campuses and accountability to the public arose in part as a result of this turbulent period (Epstein, 1974). Central in this questioning were tensions arising from issues of "academic freedom and institutional autonomy, on the one hand, and accountability to the state, on the other" (Duryea, 1981).

As single-campus public colleges and universities became parts of multicampus systems in these years, statewide centralization [see Appendix A for definition of terms] came in varying degrees to all but three states. Agencies which emerged to effect public control and centralization of authority reflected the environment in which they were created. Political forces, demands for institutional autonomy, budgetary restraints, and public misunderstanding regarding the nature of educational institutions and their functioning competed in the creation of a variety of statewide coordinating agencies (Lawson, 1976; Carnegie, 1982).

Calls for accountability were answered in part by the establishment of these statewide coordination agencies. The theoretical linkage between accountability and statewide coordination has remained largely untested. The issues of accountability and statewide authority have become synonymous with external control in opposition to traditional concepts of institutional autonomy. How do the various types of statewide coordinating agencies effect the public colleges and universities under their authority with regard to this issue? The present study poses a series of questions in pursuit of information regarding this relationship.

Because they represent the two most frequently chosen forms of statewide coordination, respectively, and because of their relatively timely conversion to these differing systems, the State Council of Higher Education for Virginia [SCHEV] and the North Carolina Board of Governors are the subjects of this examination. The study reviews the creation of these statewide agencies, their current functions and the resource allocations and outputs for each state's institutions as components of their statewide coordinating agencies. The quantitative data considered are reviewed on the basis of "output analysis", one component of systems thinking as described by Immegart and Pilecki (1973). This form of analysis (see Table A) presents selected system elements under the headings of

Output Analysis for Statewide Coordinating Agencies

Institution Descriptors	Primary Inputs	Discretionary Inputs	Outputs
Appropriations as % of State Budget	Appropriations per Student Enrolled	No. of Profesional Programs	No. Students served FTE & Headcount All Programs
No. of Institutions in System	Appropriations per Student Graduated	No. of Graduate Degree Programs	No. of students graduated for all programs by degree
% of Faculty with Ph.D.		Faculty/Student Ratio	
No. of Faculty at Various Ranks		Administration/ Student Ratio	
Primary Mission		Acceptances/1000 of State Population	
		Acceptances/Graduates Ratio	

Key:

Institutional Descriptors. Descriptive information concerning individual institutions, useful in differentiating them by mission, size and budget.

Primary Inputs State appropriations to public institutions of higher education based on funding formulas approved external to the institution's local administration.

Discretionary Inputs Allocation of Primary Inputs by the internal administration of the local institution for desired objectives.

Outputs Total numbers of students graduated by degree program and total numbers of students enrolled without regard to degree program or graduation. A primary but not exclusive measure of institutional output.

FIGURE 1

"Institutional Descriptors", information which nominally describes each institution; "Primary Inputs", appropriations received by each institution from the state; "Discretionary Inputs", allocation decisions made internally by each institution as to the use of appropriations; and "Outputs", the numbers of students enrolled and the number of degrees produced at all levels within each institution. This information serves as one component for an examination of the issues of control and institutional autonomy in these statewide higher education agencies.

Statement of Research Questions

The following questions are posed by this study:

1. Are there measurable and comparable outputs of multicampus educational systems?
2. What is the relationship of primary resources to such outputs of component institutions in the statewide systems of North Carolina and Virginia?
3. How do the State Council of Higher Education for Virginia and the North Carolina Board of Governors affect these system resources and outputs?
4. What is the relationship of controls exercised by these statewide agencies over resources and outputs to institutional autonomy within these statewide systems?

Through the examination of such issues, this study will provide a preliminary step in the understanding of the functioning of such statewide coordinating agencies as

systems of operation.

Significance of the Study

Since the early part of the nineteenth century, states have steadily increased their role relative to the functioning of higher education. By 1982 all but three states had established some form of voluntary coordination or a statewide coordinating agency for oversight of higher eduction. The Statewide Coordinating Board with Regulatory Powers and the Consolidated Governing Board were the two agency types most frequently selected. (Berdahl, 198Ø).

In 1939 only 17 of the present 5Ø states [then including the territories of Alaska and Hawaii] reported some type of statewide agency for the centralization of higher education; 33 states reported no agency of any statewide nature for this program area. Ten years later little had changed. But from 1959 to 1982 the dramatic growth of such agencies was evident. In 1982 only 3 states reported no statewide agency of higher education while the remaining 47 reported agencies described as coordinating board with advisory powers [7]; coordinating board with regulatory powers [19]; or consolidated governing board [21] (Berdahl, 1971; Control, 1982).

Despite the rapid growth of statewide coordinating agencies, their actual functions and effects on constitutent institutions are not clearly understood. This is reflected in the paucity of proposals concerning evaluation of their

performance. Their very growth has seemed at times to presume its own importance and efficiency. The studies which have taken place have consisted largely of annual reports by agency administrators, often filled with personal subjectivity; traditional and non traditional self studies of component institutions for regional accreditation associations; guidelines for self-evaluation by such agencies as the Association of Governing Boards; or often, no evaluation at all. Objective criteria for evaluation of statewide agency effectiveness and efficiency have been slow to develop, due in part to the obvious difficulty in establishing agreed upon methodology and criteria among widely differing state agencies. A 1977 Association for Institutional Research article featured a discussion among three educational authorities who indicated their concerns with the increasing centralization of higher education authority within the state government while acknowledging that somehow, public accountability of this state control must be accomplished. But none of these authorities could suggest the specifics of such accountability measures; only the information that it could be accomplished (Fields, 1977). A recent paper (Anderson, 1983) recognized the growth of centralized control and sought to identify a means of assessing the impact of that control on institutions by a financial model. Both the movement toward increasing centralized control and the necessity for understanding its

effect on higher education have been recognized. The issue which has remained unresolved concerns how various models of centralized control affect institutional autonomy and, ultimately, educational quality.

There has been much recent activity toward devising systems for higher education program review and evaluation in general. Some such efforts have sought an outcome or output measurement as part of the evaluative process (French, Berdahl, 1980). In 1982 the proposed Criteria for Accreditation of the Southern Association of Colleges and Schools (SACS) included a draft project to institute "Outcomes Asssessment" as a partial criteria for accreditation of institutions. The Association wrote in the section dealing with outcomes assessment that "The ultimate measure of the effectiveness of an educational institution, however, is its educational outcomes - - the success of its students. . ." (SACS, 1982). The perceived difficulty, and indeed the ultimate cause for withdrawal of the proposed accreditation guidelines in 1982, was expressed by William C. Friday in an address to a SACS Seminar in 1983. While acknowledging the changing nature of higher education and the accompaning demand for revised criteria to evaluate performance, Friday was highly critical of the proposed criteria, viewing them as an attempt to "develop and apply the same set of standards or criteria to the wide diversity of postsecondary institutions." Friday judged that the

criteria were "prematurely applied and without adequate thought as to the implications of procedures that are required" (Friday, 1983). Despite such criticism the proposed use of these and related measures has led to a framework of efforts which might loosely be identified with the "systems theory" approach to research and evaluation (Brown, 1970).

Though such research has been divided along several courses of investigation relative to the performance of individual institutions or programs, until recently little has been proposed for the application of "systems theory" to the understanding of statewide agencies themselves. An application of systems theory and specifically of the "output analysis" method proposed in the current study, requires an understanding and acceptance of system elements including controls exercised over inputs and outputs by statewide agency functions. These outputs, and the related inputs, defined in terms of systems thinking can serve as the basis for evaluative criteria. Yet, as Harold Geiogue has suggested, the general educational community cannot agree upon evaluative criteria. Often evaluative conclusions are drawn from data which is at best poorly defined and frequently nonillustrative of the points being evaluated. It has been suggested that a first step toward consensus on evaluative criteria to be used in reviewing statewide agencies is the simplification and explication of

what is to be measured (Geiogue, 1980). What data exist , how are they collected and what do they define?

The present study proposed an initial answer to such questions and a first step in the application of output analysis as a tool for evaluation. Assuming productivity by component institutions as a primary measure of statewide agency controls the present study sought to apply a simplified systems approach of output analysis to comparison of two higher education agencies. The proposed comparison was based on a review of the founding, current structure and functions of the State Council of Higher Education for Virginia (SCHEV) a coordinating agency with regulatory powers and the Board of Governors of North Carolina, a consolidated governing board agency. The current study further examined North Carolina's statewide agency prior to and following the adoption of the consolidated governing board as the statewide agency type. The information thus obtained was used to describe a comparison of functions between two specific agency types and provide a review of public higher education in North Carolina prior to and following the advent of the consolidated Board of Governors. As the research problems posed earlier suggest, this information provides a comparative basis for questioning the relative effect of these statewide agencies on their component institutions. It can be utilized in expanding the understanding of the functioning of these agencies. The

present study also provides limited information concerning the quantitative products of these higher education institutions that may prove useful in beginning to understand the qualitative aspects of higher education programs. Without relating the input of resources to output of students and degrees, the measurement of quality can have no basis. By posing questions concerning quantity, the study suggests where substantive differences may exist relative to the performance of North Carolina and Virginia public colleges and universities. As is suggested by output analysis theory, these indicators when compared as measures of the impact of statewide agency control over the institutions may provide one basis for raising questions regarding the qualitative comparisons of institutions and ultimately, of statewide agencies.

The study is of further significance because of its relation of control functions to resources and accountability concerns. The study supposes that as control authority committed to statewide agencies increases, so increases a commitment of funding and the the relative demand for accountability of the agency or system.

Those considered as leaders in the field of study of statewide coordinating agencies are themselves in disagreement as to how such agencies should be classified and evaluated (Millett, 1984; Berdahl, 1971). It remains difficult to directly evaluate the accomplishments of

statewide agencies. But it is possible to better understand the control functions they provide through an analysis of their operation as systems. Those concerned with the operation of educational systems acknowledge certain positive and negative aspects of increasing control fuctions (Harris, 1974). This study will relate control functions of each agency to the institutional autonomy of constitutent institution and thereby assist the understanding of how these agencies function.

Limitations of the Study

It was recognized that no study of a limited nature could hope to assess all inputs, processes and outputs of higher eductation, even if such indicators could be reliably identified and reported. It is conceded that some obvious and important products of the educational process will be disregarded by this study, notably the role of research and service as outputs of any higher educational system. As indicated in the Methodology portion of this study, students are assumed as a primary output and contrasted with financial appropriations as a primary input. This study makes no claims to establishment of a complete understanding of the bureaucratic operations of these statewide agencies.

Since the functioning of any statewide agency of higher education results in a bewildering assortment of information and processes which could defy precise definition and evaluation within the limits of a study such as this, the

present study began with the examination of each agency's creation, structure and function. The relatively simple measure of students served and degrees awarded as an aggregate of component institutional outputs was examined. It is proposed that the differing agency types for statewide public higher education in Virginia and North Carolina should demostrate a differential effect on their component institutional outputs if in fact they influence these outputs in any measurable sense.

The present study did not propose to answer the question of whether coordinating or governing types of agencies at the statewide level were equally or differentially most effective in a qualitative sense. As the SCHEV document on The Quantitative Evaluation of Degree Programs suggests, "The Council undertakes the quantitative evaluation of degree programs with full awareness that qualitative evaluation of these programs is at least as important. . . the institutions of higher education themselves bear primary responsibility for the continuous evaluation of the quality of their curricula (SCHEV, 1974).

Admitting that quality among institutions is difficult to define adequately, John D. Millet (1982) cited a high correlation "between institutional resources and institutional reputation for quality and institutional outcomes of quality." The present study is designed to provide an examination and clearer understanding of two

differing statewide agencies and their use of resources to produce some quantity of outputs. The literature suggests that such agencies, as open systems, should seek to maximize these outputs. On the basis of the findings of this study, future researchers may wish to pose questions related to the causal relationship between statewide coordinating agencies and their other potential outputs such as scholarly research and teaching.

The present work is designed to raise questions concerning where differences in statewide agency performances as systems may exist as measured by institutional outputs. The study is based on limited comparisons of information about the agencies and selected quantitative data in an attempt to raise questions concerning differences in effects on institutions related to statewide agency type.

CHAPTER II

REVIEW OF LITERATURE

The review of literature for this study is subdivided into three major sections: (1) specific writings that give a contextual sense of the educational program and system evaluations which have taken place in the past; (2) review of systems theory literature as it has been applied to higher education review at the state level; and (3) general writings concerning multicampus state systems of higher education with specific attention to the issues of purpose, structure and control within statewide coordinating agencies. The thrust of this review is to explore the substantive consensus which has given rise to multicampus systems and their statewide coordinating agencies, the corollary concerns which have arisen regarding the need for examination of such agencies and programs, and justification for the application of systems theory as a tool in understanding the functioning of statewide coordinating agencies.

Multicampus Systems of Higher Education

The establishment of statewide agencies of higher education has been linked to the concerns of autonomy and accountability. These "control" questions essentially inquire where the decision-making authority for a variety of policies and academic issues is to be lodged. In turn these

issues provoke the idea of centralized versus decentralized state control of public higher education expressed by the resort to governing or coordinating statewide agencies.

In his pioneering study of General Motors as a decentralized organization, management consultant Peter Drucker (1946) presented the major values of decentralized organizational decision-making [less bureaucracy, lateral spread of decision authority] in contrast to the potential liabilities of centralized authority [increased bureaucracy, vertical decision authority, removal of grass roots participation in decisions and increased hierarchy].

This basic view of organizational environments has been supported by social theorists such as Etzioni (1961), suggesting that superior/subordinate relationships, hierarchical power structures, and locuses of decision authority all affect the functioning and productivity of organizations. Authors and theorists in higher education administration research have consistently returned to the general themes of autonomy and accountability as factors which determine the educational organizational environment. The theoretical issues which have accordingly arisen for higher education theorists have been paralleled by real operational concerns for the campus administrations and statehouses of the nation. For these administrators and policy makers, the issue has crystallized as one of how to operationalize accountability for higher education while

protecting a certain measure of autonomy (Dressel & Faricy, 1972; Glenny, 1959). The call for accountability has mounted with the increase in system complexity, the rise of multicampus universities and the financial retrenchment of mid-twentieth century America (Rudolph, 1962; Berdahl, 1980).

Many authors have reviewed the phenomenon of multicampus universities and explained this growth as an inevitable response to the social need for specialization and diversity and budgetary pressures. Among these authors, Bowen and Lee (1971) in a study of nine multicampus systems, including the University of North Carolina System, found these pressures answered by the capabilities embodied in multicampus system functioning. In support of the observation by Clark Kerr that the rise of the multicampus system is among the three organizational changes of greatest importance in higher education since 1950, [along with the acceptance of students into governing mechanisms and the creation of statewide coordinating agencies], Bowen and Lee observe that the multicampus university has arisen to promote specialization, diversity and cooperation . . . a division of labor and alternative approaches to education in a coordinated, intercampus context" (Bowen and Lee, 1971). The arguments on behalf of multicampus systems of higher education have presumed the increased effectiveness and efficiency which these organizational forms promise. As one leading educator

has suggested:

> So long as the number of its component institutions is large enough to achieve a meaningful union of effort but small enough to be administered effectively and harmoniously, the multicampus university can be a highly successful instrumentality for achieving the important goals of higher education (Bowen and Lee, 1971, p. 465).

The effects of the "economies of scale", the theoretical linkage between sufficient size and volume related to costs, is a concept borrowed from the business world and applied to higher education when discussing optimum institutional size. Dickmeyer (1982) suggests that the traditional variables which detemine economies of scale, including "fixed" and "sticky" costs, are uncertain in their relationship with higher education institutional size. He recommends against attempting to draw conclusions as to optimal institutional size based on such criteria until the institutions and their functions are better understood.

The trend toward multicampus systems has been matched by increasing attention to the form of state-wide control or accountability that will accompany such growth. The recent Carnegie Foundation Report (1982) accepts the earlier work by Berdahl (1971) defining types of statewide agencies. Of the four types defined, voluntary coordination, coordinating board with advisory powers, coordinating board with regulatory powers and consolidated governing board, only the latter two are of concern to the present work. The coordinating board with regulatory powers is defined earlier

in this work and reflects the organization for higher education in the State of Virginia. The consolidated governing board, also defined earlier, reflects the organization of higher education in the State of North Carolina.

A recent article (Creswell, 1985) suggests a new means of ordering multicampus systems according to four types--private, statewide, heterogeneous public, and homogeneous public. Though an experimental method, this work suggests the need for better understanding the functioning of these systems and their relationship with statewide agencies.

Glenny in 1959 cited the movement toward coordinating agencies and noted the consequences of coordination versus governance type agencies in general. The low thresholds of control typlified by coordination agencies resulted in less "interference with local control"; increasing levels of control inclined toward a governance type system which usually resulted in greater uniformity and more complete control of educational administration matters at the state level rather than the local level. The typical local board with broad powers inherent in a coordinating statewide agency, according to Glenny, stood in direct contrast to the clearly defined legal responsibilities and authorities of a governing statewide agency. Governing agencies typically included full power to govern all institutions separately and to coordinate and centralize their activities

collectively.

Robert Berdahl (1971) echoed this emerging concept and its presentation of the clear issues of autonomy versus accountability. He suggested that consolidated governing boards [such as that employed in the North Carolina system] provide the strongest presentation for the planning process but tend to stress administration rather than planning. Should a single board of governors try to administer institutions of varying sizes and missions?

Berdahl suggested that in the past coordinated boards seemed the most popular choice but were heavily dependent upon a wider range of variables for success. He cited the issue critical to the present study by stating that no methodology had yet been devised to concretely measure the performance of statewide coordinating agencies with an eye toward the determination of the relative merits of differing agency types on the performance of higher education institutions.

The Carnegie Commission on Higher Education Report and Recommendations on Governance of Higher Education (1973) recognized the movement toward multicampus systems, the increasing role of governments in policy making for higher education and the accompanying increase in conflict between internal and external authorities. The commission specifically noted that increases in the size of governance agencies added to the complexity and formality of governance

structures; that excessive span of control added complexity compounding existing administrative problems; and that strong centralization of authority could delay decisions, making them less responsive to specific local problems. While admitting that total autonomy had probably never existed for higher education, the Commission noted that even limited autonomy had been increasingly threatened by an accelerated movement toward centralization of statewide agency control, rather than coordination. Thus selective independence has become the issue, not total autonomy. The distribution of authority requires a careful balance between public control or accountability on the one side and institutional independence or autonomy on the other side. "Governance,"suggested the Carnegie Report," should be a means and not an end" (Carnegie, 1973, p. 3).

Merl Baker (1974), while confirming much of the previously cited work, noted in his survey of 255 chief executives of campuses, a divergence between their "perceptions" of the "mean degree of centralization" and their "preferred" level of centralization, suggesting that those at the helm of higher education institutions expressed doubts as to the type of statewide agency authority which should be exercised over their campus. Baker presented views from a wide range of "authorities" suggesting that there was a clear difference between systems under consolidated governance and those under coordinated boards.

He defined those differences to include clear virtues attributed and sacrifices assumed with the selection of one agency type over another. Baker cited Clark Kerr as one who believed that the burden of proof must rest upon those who would increase centralization at the expense of local control.

Numerous college and university presidents have told the story of the battle they waged against external forces which they perceived to be "interfering" with the role of the president in the administration of the institution. Stephen H. Spurr summed up his experience with the following:

> The major frictions in university governance arise not from the central processes of teaching and learning but from peripheral issues that are frequently nonacademic in nature and often create discord and heat disproportionate to their relative importance. (Spurr, 1976, p. 43,)

Others have echoed the view that what is most influential in University governance or coordination may be more ethereal than substantive even though the results may be very real. In one survey ranking by forty-six institutional administrators power was perceived as a "top-down" affair in which authority was clearly viewed as coming from above. But the reflection of the survey's author following these responses paralleled the previously expressed concern of Spurr:

> Effective leadership is often based more on influence than on formal authority or power, especially

in academic institutions. (Lawson, 1976, p.233,)

The question of authority is central to the debate of who shall control public higher education. Not only is there concern for the issues of influence versus formal authority, as raised by Spurr, but for the issue of dilineation of power. As Wallhaus (1982) has suggested, the most obvious and yet often ignored issue surrounds what is an educational and what is a political decision. Though this is the essence of the control/autonomy question, it is frequently lost in more abstract concerns about "right or wrong" which neglect the practical in favor of the moral. In practice, many questions stray between the political and educational boundaries. Multiple, different answers to these questions may be quite correct, depending on the vantage point of the questioner, not simply on the issue of who has authority to give the answer.

The recent report by the Carnegie Foundation (1982) documented a trend since 1949 toward consolidated governing board types of agencies. As the locus for control of campuses becomes increasingly an issue, the Carnegie Foundation has concluded that more control or oversight, may not increase either effectiveness or efficiency in organizations, especially those of higher education.

As Millett (1984) has suggested, states have two types of interest in higher education. Administrative, management concerns revolve around questions of budgeting, accounting,

and financial management. Concerns for state coordination involve organizational issues such as duplication of functions and competition for legislative support. Both types of interest impose restrictions on institutional autonomy, but only the latter should be directly of concern to those who equate autonomy, whether correctly or not, with academic quality issues.

The literature dealing with multicampus systems presents a confounding series of paradoxes. On the one hand many authorities proclaim the benefits of multicampus systems while others decry their bureaucracy; the form of the statewide coordinating agency is also an issue of debate, most frequently centering on the issue of more or less centralized control; finally, the individual administrators who sit at the head of institutions question the role of centralized or external authorities while suggesting the real source of control may be elusive when sought.

Increasing social pressures suggest that the very growth that once made the expansion of higher education viable and visible to the public is now to blame for the growing public demand for accountability in a shrinking economy which is increasingly competitive in its allocation of limited resources. Harold Geiogue (1980) has suggested that the difficulty with current demands for accountability is that evaluative criteria have not been agreed upon by the general communities within and external to educational

institutions. Too many conclusions have been drawn from non-existent or subjective data. He suggests that one solution for a proper evaluation of statewide coordinating agencies is to simplify the coordinative process and present clear-cut ideas of what is to be measured and expected from the statewide agency.

This seemingly simple advice has proven difficult to follow as large numbers of systems have found the role of their statewide coordinating agencies differing from those of other states. Only very partial agreement has been found as to common grounds for statewide coordinating agency agendas for evaluation of their services on behalf of institutions. These common issues include the previously cited question of external versus internal control, how much power will be located with whom, proper size for agency boards and selection of membership for the boards. Varying power-sharing arrangements, even within the loose labels of agency types, and the real lack of consensus as to powers and missions, combine to confuse the eager evaluator. In the interest of the aforementioned simplification of this quite complicated process, it has been suggested that evaluators be more concerned with the role of individual institutions within systems or statewide coordinating agencies and that the quality of their performance expecially with regard to major outputs be examined (Miller, 1980; Millett, 1982, 1984; Pile, 1982; Potter,

1983).

The issue of political control is often confused with the interests of educational quality. Though overlapping, the two are not synonymous. Just as the issue of control, as exemplified by the question of politics versus autonomy is muddled, so the understanding of quality has a similar translation difficulty with various publics. Again, the vantage point of the observer is critical. Stevens (1983) indicates that educators favor definitions of quality based on institutional reputation, resources, peer perceptions, value added, and extension of one's self beyond former limits as reasonable measures of educational quality.

Eyler (1984) adds that administrators seem most interested in maximizing institutional resources as the best definition of quality. But all those involved as participants in the higher education process prefer no assessment of quality rather than a public assessment, especially one based upon comparison with other instutions. Those in education fear that such comparison will lead at best to negative publicity about some aspect of the institutions of which they are a part, suggests Eyler.

The North Central Association of Colleges and Secondary Schools define quality as an equitable education for the investment of time and money by students. This in turn translates for taxpayers to excellence, that most elusive but all inclusive of eduational phrases, and efficiency of

educational operations, which is translated into accountability (Stevens, 1983). The public, according to Eyler (1984) will increasingly demand demonstrated effectiveness in meeting quality concerns. This implies that someone will need to make judgments about the maintenance of standards. Who will make these assessments?

The literature on multicampus systems and statewide coordinating agencies yields little consensus as to the means while clearly citing the need for further examination of the performance of statewide coordinating agencies responsible for multicampus systems. There exists a major concern as to the relative effectiveness of the various statewide coordinating agencies.

Educational Program Review and Evaluation

How should one compare statewide agencies? Efforts at individual program, institution and systemwide evaluation have been varied and yield no clear consensus as to methodology or reliability. On a continuum from individual programs to system evaluation efforts, there is an apparent decrease in certainty and consensus as one enters the discussion of evaluation of statewide coordinating agencies of higher education. There are models for evaluation, self-study guides for evaluation, cost-effectiveness studies, effectiveness assessments, surveys seeking common consensus on the benefits of programs, classical evaluation theories, and case studies. Though the choice between selection of a

consolidated governing board versus a coordinating agency is raised by numerous authors, few have any suggestion as to a suitable means of evaluating the relative performance and thus, the differences between such agencies. John J. Corson (1974) has suggested that such agencies might be at least differentiated and categorized by the relative vitality they encourage in their constitutent organizations. Among such characteristics he lists 1) a clear and distinctive purpose; 2) the freedom of members to pursue their work and determine its course to some extent; clear, imaginative and decisive leadership; and, 4) a sense of accomplishment for those in the organization. Yet these criteria and the suggestions which Corson provides for operationalizing them through specific policy implementation are at best subjective and judgmental without regard for any reasonable statistical or objective data. They rely on the competence and general agreement of individuals who make the evaluative decisions. Such dependence may not be legislated or enacted by boards of any sort, no matter how well intentioned.

One of the hallmark virtues claimed for the various types of statewide coordinating agencies is perceived in an examination of the theories and experiences provided by advocates of centrally planned change. Robert Mayer (1974), editing the proceedings of the Quail Roost Conference on Centrally Planned Change has offered theoretical differences

arising in the definition of centralized agencies. He has suggested that any definition of centrally planned change includes by its very existence the policy of compromise and consensus, arising from the nature of "interest group liberalism" practiced in the American policital landscape. Under this system, consensus is achieved through the setting of goals that are broadly representative of the desires of the population. Mayer cited Theodor Lowi and Etizoni in suggesting that such policy making results in incrementalism, an actual undermining of popular control through dilution of political power, and a lack of protection for unorganized interests, wherever they exist. Increases in control will result in decreases in consensus type decisions, a sort of "zero-sum game" in which the original purposes, centrally planned and organized change are accomplished only through a loss of local authority in favor of a broader consensus which itself represents safe educational policy rather than innovative and imaginative planning for the future.

In a work entitled The New Corporatism, Pike and Stritch (1974) have affirmed this interest group evaluation approach of accountability to consensus goals. They portrayed a society in which such policy methods increasingly result not in accountability or evaluation but instead in the licensing by the state of virtual monopolies in exchange for the recognition of the state's authority over the monopoly.

This in turn becomes corporatism rather than simple interest group liberalism, in which an almost contractual relationship exists, defining which interests will be met in exchange for what sacrifice of autonomy. This scenario eventually denies the need for evaluation of statewide coordinating agencies by admitting that such agencies ultimately have complete control and must be accountable to no one so long as the basic contractual relationship, which may have little to do with the purposes or goals of educational institutions, are met. Control becomes a trade off for competence and differences become unimportant.

Lee and Bowen (1975), in a replication of their earlier 1971 study, sought some measure of multicampus system effectiveness by means of a questionnaire and interviews with the system heads of nine statewide coordinating agencies and university systems This study, while enlightening, attempted to define no objective criteria but merely the subjective views of the subjects studied. While confirming the evaluation issues facing multicampus systems already referenced in this study, this approach offered no new suggestions for dealing with those issues.

Others have attacked the issue of evaluation by proposing guidelines by which statewide coordinating agencies of whatever stripe, might seek to evaluate themselves. Such guidelines result in little more than political etiquette guides for these boards when dealing

with branch campus relationships and provide little in substantive evaluative material (Burdick, 1975).

Specific university systems have proposed to evaluate their own work based on a policy-making process which relies on models based in systems theory. Such models often suggest the establishment of goals, objective paths to the goals and objective identification and confirmation. These effects can result only in indirect confirmation that goals cited have indeed been achieved. Such models do not provide for any comparative data regarding how successful the particular agency may be relative to other higher education agencies; only those goals of the particular system which sets them will be significant, once achieved (Sullivan, 1976; Pettit, 1978; Cohen, 1980). Such evaluations obviously can become a self-fulfilling prophecy, with the measure of success becoming whatever the agency decides it to be. Results of such evaluations beg the question of what standards the outcomes should be expected to meet or exceed.

Probably no institution has been as prolific in its sponsorship of research into the problems and potentials of multicampus systems as the Carnegie Commission on the Future of Higher Education and its successor, the Carnegie Council on Policy Studies. In the 1973 The Capitol and the Campus, the Carnegie Commission on the Future of Higher Education sought to distinguish between the "effectiveness" and "efficiency" of state efforts in providing educational

opportunities to citizens. This report chose to deal with how successfully and how effectively the states were dealing with educational opportunity. This could certainly serve as one potential measure of evaluation for statewide systems of higher education. Two of these measures selected by the Commission dealt with the undergraduate enrollment statewide as a percentage of the college age population and the first time undergraduate enrollment as a percentage of that year's high school graduates.

Two doctoral dissertations concerned with higher education evaluation sought to deal with the concept of planning and its evaluation as a means of assessing statewide agencies of higher education. C.R. Sanders (1979) constructed a two-part model for evaluation of statewide planning consisting of eight matrices, emphasizing the process of planning rather than the outcomes of planning. Though an impressive attempt at pre-structuring and post-evaluation of planning, "experts" who were invited by Sanders to review the model suggested it was a highly abstract and complex proposal which even they found difficult to apply to everyday processes.

A doctoral dissertation by Michael Nettles (1980) sought to develop criteria and methods for evaluating statewide planning. Noting that a variety of authorities in the field of higher education including Millet, Berdahl, and the Education Commission of the States have encouraged an

evaluation of planning and or the functions of statewide coordinating agencies, Nettles presented criteria for planning and its evaluation which were reviewed by seventy-five "experts" in the field of statewide planning. The resulting study provided less complexity than that suggested by Sanders but concentrated solely on the planning process as the critical concern of statewide coordinating agencies. It might be argued that the most direct product of planning would be more effective and efficient productivity of students.

One of the most thorough and thought-provoking works in the area of higher education evaluation was found in a joint paper by French and Berdahl (1980) which discussed the broad range of concerns confronting evaluators. Citing the traditional arguments concerning autonomy/accountability, the authors began by asking, "who shall evaluate?" Utilizing the "Theory of Performance Budgeting", which calls for indicators of agency outcomes as the basis of fiscal appropriations, they indicated the opinion that performance should be a primary consideration. Asserting that in the absence of established criteria for budgeting and evaluation, alternatives must be examined, they offered the LPE Movement [Legislative Performance Evaluation] involving the effectiveness of units of operation; sunset legislation in which programs must be justified or cease operation by a specified date; possible evaluation by federally mandated

State 1202 Commissions; and future evaluation by regional accreditation agencies currently involved in institutional self-studies and accreditation.

Berdahl and French concluded with a presentation of the Carnegie recommendations for the establishment of external review authorities in which external governments review the performance of individual schools [a program never implemented after the recommendation was made public]. The authors of this study cited the difficulty in any of these evaluative schemes arising from the confusion of process with results [in the present study termed "Discretionary Inputs"] with outputs. Recognizing many of the efforts reviewed in the present study, these authors found that a number of obstacles to thorough evaluation review of statewide coordinating agencies remain including the difficulty of acknowledging that personalities in agencies may be more important than structures; that formal and informal structures vary greatly; and, finally, that the lack of pertinent research literature on the topic makes construction of valid evaluation efforts more important yet most difficult.

Citing a variety of efforts in behalf of statewide coordinting agency evaluations, including the Association of Governing Boards self-evaluation kits, the University of Missouri "13 Criteria for Evaluation", the Alabama Evaluation Commissions appointed each four years, efforts by

other individual state agencies to establish subjective criteria, and the particular efforts in Connecticut and South Carolina to establish Legislative Program Evaluations, Berdahl and French found no clear-cut success among all these efforts. Despite such pitfalls, they concluded, with Howard Bowen, that though difficult and subject to a variety of problems, the best possible effort to evaluate these agencies must be made by educators to appease critics and improve educational processes (French and Berdahl, 1980).

A doctoral study by Henry Frost (1978) addressed a number of the evaluative concerns. Frost constructed a study in which certain characteristics of statewide coordinating agencies, such as type, responsibilities, resources, etc., could be related to selected indicators of higher education, including access to higher eduation, student distribution among categories of institutions, student program completion rate, funding, etc. The study concluded that within the limits of available data, both characteristics of statewide coordinating agencies and indicators of higher education were sufficiently broad so as to discourage any useful correlational findings. The study suggested that the definition of a successful statewide board might be possible if one could examine a state with a board and then compare what might have resulted had the board not existed.

The broader field of eduational evaluation offered

concerns for the development of evaluation models while providing little in the substantive area of evaluation of statewide coordinating agencies. Surveying a variety of evaluaton methodologies and theories, Don E. Gardner (1977) suggested that methodologies for evaluation are often doomed to failure because they are selected for the wrong reasons, such as political motivation or availability, rather than because they reflect the best possible effort which can be made. Many of the evaluation theories explored by Gardner utilized systems theory including a concern with relation of inputs to process and outputs. The author concluded that the work of many of the theorists reviewed, including Stufflebeam, and Worthen and Sanders, though important to their field, is unfamiliar and unfriendly to non-experts, including those academic administrators who could best utilize them for purposes of program review and evaluation. These generalized concerns would seem to apply equally well to those concerned with statewide systems of higher education and their evaluation.

A number of agencies have offered guidelines or standards which propose to allow institutions to evaluate themselves. These "guidelines" approaches did not prove useful to the current study but demonstrated that the specific guidelines for state accreditation agencies basically resulted in self-study, an effective method for confiming that which agencies already knew about themselves.

Though such information can be useful to the agencies themselves, the guidelines suggest virtually no generalization of results to agencies other than the specific one under review. Many such guidelines resulted in a checklist approach providing information about how to organize boards for certain purposes but little about the evaluation of their function (Association of Governing Boards, 1983; Rabineau, 1983; Warren, 1980; Western Association, 1981).

The Florida State Board of Regents (1975) offered such a review utilizing the CODE [Comprehensive Development Plan for higher Education] at Florida State University. This approach through the utilization of systems analysis [Planning-Program-Budget System or PPBS] and measures such as degree productivity began to reach for objective criteria but ended in a "trip-wire" approach which indicates that when degree productivity or PPBS evaluations reach a certain measure, intervention would be considered or automatic cutoff of programs would result. These raw measures of program performance were dependent on completely internal feedback or external intervention after a critical impasse had already been reached. They did little to provide meaningful feedback to the organization about its process or products since neither is related to inputs in these evaluations.

A similar New York State report (1976) supported the

theory of output assessment but produced a narrative of accomplshments with little generalizable application to multicampus settings. The advantages and disadvantages of state-level self-studies or case histories as evaluation in a review of state-level academic program review polices have been discussed by several authors. Though not dealing with multicampus review, the issues raised were indicative of the difficulties inherent in broader, system-wide evaluation and review efforts.

Barak (1975) suggested that the number and diversity of programs which could potentially be reviewed led most states to utilize a screening mechanism of some type, either arbitrary or with delineated programs subject to review on a regular basis. South Carolina, for example, utilized a simple test of "low average annual degree production" to cull among programs to be extensively reviewed.

North Carolina, at the time of this review by Barak in 1975 had no program review policies and procedures in effect for higher education at the state level. Virginia used a "trip wire" formula based on the number of students enrolled versus the number graduated by programs. This triggered a review response from the state or institutional agency when critical, pre-set levels were reached. Barak summerized his findings as to the "typical" type of state program review effort to include the following elements: program description, purposes and objectives, need analysis, cost

analysis, resource analysis, program accreditation, and availability of adequate student aid. Though neither a state-wide system review nor an effort to evaluate comparative performances among state-wide agencies, Barak's work suggested that the commonly utilized program review procedures contained the elements of system analysis as they might be applied to a state-wide higher education authority. Other case history approaches utilizing evaluation techniques similar to those indicated above included Groves (1979) and Heydinger (1980).

Seeking a balance between the ever-present concerns of accountability and autonomy, Chambers' (1977) article entitled "Durability of Reasonable Autonomy for State Universities" departed the previously cited evaluation types and their limitations by proposing the novel suggestion that higher education be considered essentially a forth branch of government. By treating it as such, as appropriate system of "checks and balances" could be established that guaranteed both accountability and autonomy. Interaction with the other three, existing branches of the federal government would further guarantee accountability.

One prominent effort at evaluation in recent years has revolved around two terms: output assessment and outcome evaluation. Though the two terms seem similar, the literature points out clear differences.

Scriven (1973) described summative evaluation as

concerned with a number of issues including the end-product of the process. He presented the concepts of goals versus achievement, suggested the relation of goals to outcomes and cosidered comparative evaluation as essential to the basic methodology of any results-oriented performance. Stufflebeam (1973) discussed the relative values of input evaluation and product evaluation. In these procedures operational definitions for objectives and measurement criteria, associated with standards, when compared with objectives resulted in an interpretation of outcomes. Both Scriven and Stufflebeam emphasized the role of context in comparison of inputs with outputs or outcomes.

As the terms outputs/outcomes are used in the literature, there is basis for a good deal of confusion. Output, in the systems analysis literature, refers to the product of a system which may suggest either long-term effects or short-term output, relative to the immediate end of the process. We shall therefore use the term output to relate the immediate products of higher education institutions while reserving the term outcome to a more longitudinal relation of the product following some relative passage of time and the effects of exposrue to society. Outcome evaluation will seek to deal with the total student and the impact of his education upon a long-term life experience. Output assessment will differ in that it will seek to examine the immediate products of the educational

process. The question here raised is whether immediate products or long-term benefits should form the basis of our evaluative measures.

Brown (1970) suggested that the model of "value added" to students as they pass through the process of university education would tell much about the improvement in students attributable to eduational institutions. He called for the establishment of statements of objectives which could then be used in the formulation of measures of outcome assessment. But Enthoven (1970) argued that any substantive index of knowledge possessed by students at any given point in time was likely to remain elusive. He suggested that the "value added" theory must simply assume through some form of tesing what the student knows at a given cut-off point, and then use similar testing to derive what the student has gained based on the purposes of the institution through which he passes.

Others have sought to establish outputs based upon measures of credit hours as the usual transaction of the "educational industry". This method can quickly become complicated however by the issue of quality versus quantity of credit hours measured. This leads to a suggestion of a weighting system of credit hours based upon subject topic or similar criteria. While one may measure the cost of credit hours, the complexity of computing this cost against the quality/quantity issue quickly becomes unmanagable. O'Neill

(1971) further suggested that the substitution of "cost differences" for "price differences" would be a more realistic approach in seeking to determine actual cost/benefits. In any event, this proposal also confuses the question of primary inputs with discretionary inputs by suggesting that credit hours are a primary rather than a discretionary input.

Howard R. Bowen (1979) sought to defend the practice of evaluating the outputs/outcomes of higher education.

> The concept of efficiency has a place in all human endeavors. . .there are better ways and poorer ways of going about teaching-learning, and there are also more expensive and less expensive ways of going about it. The most efficient ways are those which yield the highest ratio of results to cost. Colleges and universities could be more efficient if they paid greater attention to discovering their outcomes. (Bowen, 1979, p. 22)

Bowen attempted to compute the costs of education through the establishment of weighting formulas which sought to measure the outcomes of higher education in proportion to their costs. Bowen was quick to caution against the confusion of inputs with outputs. His insistence that the outcome measure must include as much about the total student and his later life success made his evaluation model most unwieldly, especially for the evaluation of past performance for which the suggested criteria were not in effect. Bowen declared that one must control for outside, extraneous variables which might otherwise skew the results of outcome measures.

In his later work (1981) Bowen pointed to a scale devised to measure the cost per student for higher education which might be applied to any institution of higher education. While the range of differences shown was surprising, as Bowen himself points out, such comparative information was useful in raising more questions than it answered.

Much of the literature related to the questions of inputs and outputs/outcomes in higher education was, predictably, couched in terms of cost/benefit analysis which utlized some forms of input as costs and some forms of output/outcomes as benefits. Confusion of true inputs versus what are termed discretionary inputs in the current study quickly arises. Furthermore, complexity becomes a concern for any evaluative method estimating the worth of outcomes in higher education.

Eckaus (1973) constructed what he claimed to be a "Disaggregated Approach" in estimating the returns of education. While his methodology became equally bogged-down with statistical jargon, he too pointed out the difficulties of relating certain outcomes, such as financial earnings, with the long-term effects of the educational product.

Halstead (1974) dealt with the broad concern of statewide planning for higher education, one facet of potential evaluative interest, but approached this topic through the means of suggesting cost/benefit analysis of

planning by assessment of specific and individual categories of what was planned for, and how the planning process proceeded.

In concluding the review of program and system evaluation, this researcher has found that a variety of concepts were raised which speak directly to the concerns of individual institutions and statewide systems for construction of goal-oriented planning and evaluation processes. No one of these proposals, however, spoke to substantive statewide coordination agency evaluation on any objective scale that would allow generalizations to other statewide agencies. Likewise, none of these proposals dealt with the longitudinal study of past performance. Many of the criteria and policies advocated would require previous commitment to goals or program review policies before such study could have been undertaken.

The issue of statewide coordination of multicampus universities has been demonstrated to be a growing concern for higher education administration, accentuated by calls for evaluation of these statewide coordinating agencies. Evaluative efforts have been proposed and on occasion implemented with varying degrees of success for individual institutions and some multicampus systems of higher education. No model for evaluation of statewide coordinating agencies of higher education has been found which provides quantifiable criteria and none of the models

located can be agreed upon by experts in the field.

Systems Theory and Higher Education

We turn now to a review of research which has been performed in the field of systems theory in general and with regard to specific applications of these theories to the field of statewide coordinating agency evaluation for higher education.

As Singer (1971) pointed out, the use of a systems approach in organizations extends into history to the year 3000 BC. What is notable is the lack of application in organizational settings until recently, and the almost total lack of appropriate application to the educational institutions and systems.

Present-day concepts regarding systems theory, or General Systems Theory, were given form by the work of Bertalanffy (1950, 1968). Bertalanffy outlined the train of biological evolution that led to his assumptions regarding systems. Noting that in nature individuality does not exist, only "progressive individualization and development" which result from progressive centralization, he observed that certain of these individualized parts gain dominance in a single role, thus allowing temporary dominance of the whole. Viewing these parts as components of the main system, he suggested that a hierarchy of systems exists in all science, linking one to another. Systems Theory becomes a means of using the concepts of systems and modeling to

observe complexity, the reality of organizations in simplified fashion-- an abstraction of reality through man-made models.

This view was expanded by Laszlo (1974), who observed the inevitability of change in an evolutionary view of organizations. These changes "tend toward higher levels of organization in structures of greater complexity." Disturbances in existing structures of systems result in the merger of some systems and the dissolution of others.

The Society of General Systems Research (1982) had come to view such tendencies as inevitably leading to questions of centralization versus decentralization. While decentralization is often lauded for its restoration of human scale, autonomy and dignity to organizations, centralization is praised as a method of providing responsibility or accountability. Finding that in any open system, responsibility and autonomy are linked, the compromise is one of understanding the subordinate role of lower level systems, with their important local functions, complimented by the primary nature of higher level systems with their responsibility for more global concerns.

Innovations in the field of systems analysis have recently arisen from the discipline of political science with regard to the ongoing research into its theories and potential applications in government and public policy settings. Easton (1953, 1965a, 1965b) is recognized as a

leading authority in the application of systems analysis to political life.

In constructing a model of political analysis through the use of systems approaches, Easton provided from basic system theory a multi level model in which the complexity of inputs were recognized as summary variables that "concentrate and mirror everything in the environment of relevance to organizational process." Inputs may be selected to reflect the forces of interest to the analyst. Easton considered the inputs to be demands and supports which society imposed upon the institution. Outputs of the system assist us in realizing consequences arising from behavior of system members. The outputs also may be selected to reflect those areas of the system which are of interest to the analyst.

Meyer (1972, 1979) studied the mechanics and functioning of public bureaucracies. though not related directly to the field of education, his conclusions regarding the effect and impact of environment upon large institutions and systems reaffirmed the notion that only by regarding systemic inputs, outputs, their relationships and the changes resulting from the application of feedback to input operations, could we hope to understand and administer these complex institutions. Though both Easton and Meyer provided an essentially political application of their theories, they may prove fruitful in providing a framework for analysis and

evaluation of higher education.

Certainly a multicampus university operates within an environment of demands and supports, producing outputs of consequence to the members of the organization. Easton's concern with feedback of output information to the input level completes the basic model of system function common to all system theory. This notion of feedback to inputs is of specal interest to those concerned with higher education evaluation. Feedback to the decision-making process provides the functional usefulness of an evaluation process. It is this same area in which so many evaluation efforts thus far reviewed fall short, providing output information which is either inapplicable to the original inputs or is misapplied.

The efforts to apply systems evaluation to education have frequently taken the form of a basic application which seeks to introduce the innocent to the discipline without indepth examination of applications. This approach is reflected by Banghart (1968).

A variety of systems evaluation models have been borrowed from business management disciplines and applied without great imagination or alteration to the field of educational administration. Secondary education evaluation and planning in North Carolina has been reflective of such a "trendy" approach with the use of PPBS. Beginning in 1964 schools at the secondary level began laboring under the

burden of an accountability form of comprehensive planning based upon PPBS. Such concepts have been criticized by some authors on the basis of their inapplicability to highly complex processes and the generally poor preparation of those who must utilize such programs (Cornuelle, 1975; Lee, 1980; Schurrer, n.d.).

A 1970 doctoral dissertation (Copa) cited studies commissioned by the United States House of Representatives. These studies concluded by suggesting the inadequate and misleading nature of available educational statistics, especially with regard to their use in the decision making process. A House study in 1963 raised this alarm and a more recent study in 1970 reaffirmed this concern. Copa found little to suggest that this view was unjustified.

Copa suggested the utilization of educational statistics toward an understanding of the objectives of educational systms in terms of expected outputs. The effectiveness of educational organization could therefore be judged according to how well such outputs were found to be accomplished. Copa indicated in his study that usual educational statistical analysis described inputs without reference to relating those inputs to the outputs of the educational system. Without proper relation to one another, the analysis of inputs or outputs was seen as useless. Following Easton's earlier work, Copa advocated the disaggregation of inputs into relative educational and non-

educational categories of the total educational environment. Subsequent grouping of related inputs would allow the elimination of unrelated inputs for purposes of analysis. The impact of related inputs on the subsequent outputs of the educational system would thus be identifiable.

A 1972 dissertation by Snow supported the assertions of outcome analysis theorists. This study suggested that educational functions in organizations have continually lacked accountability. Educational administrators evaluated or were evaluated in terms of numbers of stduents trained or outputs only, while the total gain in learning, including inputs, was ignored. Snow proposed the application of systems theory to educational evaluation, outlining a broad range of behavioral and test validated indicators which would provide for evaluation of system outcomes.

Snow applied his model to IBM as a large scale corporation utilizing educational processes to improve employee performance. This procedure represented a reversal of the traditional strategy in which industrial or business models were applied without modification to educational settings. Snow's purpose in this application was to test the effectiveness of his model on a large scale organization, theorizing that educational oragnizational outcomes as evaluated through such a model would be more broadly applicable if generalized to a large corporate education program.

The interest in broad application of systems evaluation models to educational systems was recognized by the Carnegie Commission in a 1972 report and recommendations. The Commission supported an analysis of the relations between use of resources or inputs and the accomplishment of goals or outputs. They suggested the obvious but, in some educational circles, heretical notion that institutions should seek the maximum in economies with the minimum sacrifice of quality. This is the essential dichotomy between accountability proponents and educators who advocate quality at the sacrifice of accountability.

The Carnegie report encouraged the rapid and flexible adaptation of educational organizations to changing needs for education, research and public service. The Commission indicated that without such considerations, the growing gap between resource base and the growth of educational funding requirements would result in ever more coordination, governance and external control strategies from the public sector. While supportive of input/output evaluation and the need for qualitative and quatitative measures to allow such evaluation the Commission was not forthcoming in suggesting ways in which such evaluation could be performed.

Immegart and Pilechi (1973) concerned with systems theory in relation to education, asserted that a system could best be studied by examination of its results or outputs which arose as a direct extension of organizational

or system activities. Feedback from this output could then be used to redefine previously stated goals. Through a continuing refinement of goals, feedback would ultimately control system activity, and thus affirm the importance of examining outputs as a fundamental aspect of systems evaluation.

In furthering this argument, Immegart and Pilechi discussed the differences between closed and opened systems. Asserting that closed systems which do not have environmental interaction move toward entropy, they argued that open systems interact with the environment and therefore utilize feedback and refinement to fight entropy and encourage new growth and direction. The dynamic "life state" thus created was typified by increasing order in system functions, differentiation of processes, variation in proucts and finally increased complexity. It was asserted that schools and colleges exist as open systems. Such institutons could thus benefit from enlightened systems theory evaluation. As open systems, they should "maximize both. . . existence and . . .its relationship to its environment" for continued survival. Without system evaluation and its implied feedback loop, entropy and ultimately collapse were viewed as unavoidable.

Immegart and Pilechi indicated that the properties of all systems [and accordingly the elements to be considered in system evaluations] included the tendency toward entropy;

existence in a time-space, forward moving direction; definite boundaries, either hard or permeable and internal variables existing in conjunction with external parameters; and subsystem existing in conjunction with suprasystems.

The authors expanded this work by suggesting additional properties of open systems including inputs and outputs; the seeking of a steady-state and thus adaptation to the environment; self-regulation; the existence of different paths which could acheive similar results, demonstrating the concept of equifinality; the experience of dynamic interaction with internal subsystems; the utilization of feedback for steady-state maintenance; the exercise of continuing and progressive segregation of divisions into functional and hierarchical subsystems; the demonstration of progressive mechanization by ordering of procedures and processes into fixed arrangements; and the tendency to seek negentropy or survival.

The concept of "output analysis" as explained by Immegart and Pilechi presents a basic means of understanding sysems function through the study of outputs. Utilized as feedback to alter and restructure functions of the system, outputs present a crucial and frequently quantifiable means of observation of system results. When functionally applied to the systems as feedback, these outputs can substantially alter the systems tendency toward entropy. Thus an application of "output analysis" can help immeasurably in

understanding the current status of system functioning.

The systematic view of higher education was defended by Epstein (1974) in a review of the growth of demands for accountability. According to Epstein's work, accountability in the first century of university life meant stability and the absence of major challenges to authority while minor structural changes were accommodated in the face of an enormous growth in the resource base. Concerns for systematic accountability arose as a result of the social upheaval of the 1960's when the overall structure and governance seemed, to the public, almost non-existent.

Present-day accountability came to mean questioning the return from the investment of limited public resources to serve a dwindling population base of new clients in large, existing educational systems. Systems evaluation thus came to seem not only a possible but a necessary view of the complex organizations of higher education if demands for accountability were to be answered in a reasonable fashion.

Those most frequently concerned with gathering evaluative information are often the members of state legislative agencies which must assume responsibility for educational appropriations and thus, providing the public with accountability measures.

Kroepsch (1972) edited a volume on legislative decision makng in higher education which raised the issues of systems inputs and outputs relative to decision making for resource

allocation. Kroepsch suggested that a simple relating of dollars and cents to students produced was inadequate. The process of education, including the various inputs and outputs of the educational environment, must be recognized if not fully accounted. Resource allocation decisions should only be made on the basis of costs and benefits of current and contemplated actions. System evaluation in this view, had been applied without justifiable attention to realistic goals, time, money and training necessary to make system analysis tools such as PPBS work. This author concluded that only through the skillful analysis of a range of data encompassing the input/output environments could a systems approach to evaluation of higher education be successful.

Farmer (1972), in an extension of the above approach, suggested that research into the outputs of higher education was a vital necessity so long as the total environment and long-term outcomes as well as short term outputs were recognized or differentiated. This author found no means of identifying all appropriate outputs and inputs so that full analysis would be possible.

Hodgkinson (1972) encouraged change in higher education evaluation practices but expressed concern that change would come on the basis of artificial formulas for system evaluation or cost benefit based on cost per credit hour or similar notions. These, according to the author, measure

cost, not education. He too suggested that a fuller evaluation of the system environment must precede decisions on effectiveness or products or efficiency of resources allocation.

Pincus (1980) noted that policy makers differ from evaluators in their expectations of assessment. Evaluators seek generally to approximate a research, quasi-experimental condition, while policy makers seek more functional findings. He argued that what is needed is descriptive and interpretive information. While this may represent an imperfect reality for some, he suggested that political necessity requires policy makers to understand what is happening in straightforward terms. He concluded that the purpose of evaluation ought to be a demonstration of the relationship between intervention and outcomes - what difference has your policy or program made?

Pincus' work again suggests a misunderstanding of the educational process and the environment in which it operates. The misunderstanding extends not only to those outside the educational systems, but to those within as well. The earlier references to a failure to separate the political from the educational autonomy/quality issues is extended by Pincus into a wider failure to grasp the nature of the total systemic environment in which public higher education operates.

Discussing educational organizations as loosely coupled

systems, Weick (1976) has echoed the earlier work of Allison (1971). Both theorists observed that organizational processes have been badly misunderstood, with post-hoc rationalization processes which attribute motivation and direction where frequently there has been none. Weick has extended this view to educational organizations specifically, suggesting that:

> Educational organizations are holding companies containing shares of stock in uninspected activities and subunits which are largely given their meaning, reality and value in the wider social market (Weick, 1976).

Public higher educational organizations are large-scale, bureaucracies which function as open systems, depending upon input from their environment for the adaptive functioning which guarantees the "life state" rather than a continual plunge toward entropy.

As the literature has demonstrated, coordination of the functioning of these organizations by statewide agencies is the target of criticism concerned with the question of control versus institutional autonomy and educational quality. Substantial misunderstanding exists as to the necessary resolution of political issues which must coexist in the system environment with these issues of autonomy and quality. This environment, as in all living systems, is maintained in a precarious balance of forces, including the political state and the community constituency. The success or failure of this balance in the world today depends in

large measure on the functioning of the statewide coordinating agencies which control, in varying degrees, the insitutions which comprise public higher education.

CHAPTER III

METHODOLOGY

The methodology for the present study was based on a review of the statewide agencies and their institutions and general systems theory (Bertalanffy, 1949, 1968; Laslow, 1974) and the "black box" model described by Ashby (1956). A specific derivative of general systems theory is described by the term "output analysis" (Immegart & Pilecki, 1973). For the purposes of the present study, a model for description of public colleges and universities as components of statewide coordination agencies was constructed (see Figure 1, p. 4). The model utilizes Institutional Descriptors to give nominal differentiation to each college or university; Primary Inputs to describe state appropriated financial resources; Discretionary Inputs to describe selections made internally by the institution as to the allocation of Primary Inputs; and outputs of students graduated at all degree levels and total number of students served, regardless of degree.

Such a construction was justified by the belief that a system or organization can best be examined through the results of its actions - understanding its quantitative outputs as well as their consequences for the organizational system as a whole. Output is critical because it can

represent quantifiable results, and need not be confused with assessment of the process which generates the results. Theoretically output can also serve as feedback to the system inputs, providing a means of redefining and "tuning" those inputs to appropriate processes which in turn produce new outputs and feedback (Immegart & Pilecki, 1973). How output is regarded and utilized by a system can explain much about the system and its environment.

Virtually all public higher education systems operate on appropriations based in part on full-time equivalent student enrollment (FTE). In funding formulas, the FTE figure is considered primary to establish ceiling and floor funding limits. Though some systems, including Virginia with its Budget Appendix M seek to escape "formula funding" both Virginia and North Carolina still rely in large measure on FTE enrollment for budgetary appropriations. It is rational to view students as the primary quantifiable output of the educational system without whose enrollment, appropriations would cease. The present study makes this assumption. The relationship between the output of students, either by degree category or total enrollment, and the primary input of financial appropriations based on this enrollment establishes the basis of a feedback loop. Inputs in this model become the appropriations based on enrollment of additional students or the maintenance of a student population at a level appropriate to the needs of

institutional funding. How statewide agencies are empowered to deal with such a system and how they in fact deal with it in reality relates to their control functions over individual institutions within each system.

Public educational institutions act as open systems, exchanging materials with their environment. They seek to maximize their outputs in an effort to maintain organizational functioning at the highest level. To become isolated or closed to their environment would be to admit the probability of entropy and eventual death of the organization (Immegart and Pilecki, 1973). The relationship of students enrolled or graduated by degree, to appropriations, filtered through a comparison of discretionary inputs, is important as a reflection of the relative success of a statewide coordinating agency in meeting its objectives of organizational maintenance. To paraphrase David G. Brown (in Lawrence & Patterson, 1970), we have assumed that higher education is good without defining objectives nor measuring response. How much do statewide coordinating agencies contribute to organizational health in a systems sense ?

Enrollment based funding, as shown by the Carnegie Foundation (1982), does not accurately reflect the real costs of higher education, many of which are not proportionately decreased with drops in enrollment. Yet most statewide agencies rely on such funding formulas. If

as the Foundation's report(1982) suggests, "increased oversight does not necessarily lead to greater efficiency and effectiveness in any organization, especially in higher education," then the operation and function of centralized systems of governance in higher education should be subjected to examination of their relative merits. "The ultimate measure of the effectiveness of an educational institution, however, is its educational outcomes - the success of its students "(SACS, 1982). If, as the review of literature for this study suggests, it is not yet possible to adequately quantify outcomes as long-term educational effects, we can begin by studying the initial outputs of educational systems, their degree production at all levels and their total student enrollment without regard to degrees as an indication of how the systems function. This is both feasible and appropriate in light of institutional and system reliance on such figures to justify continued or increased allocation inputs.

Presentation of Data and Analysis

Data contained in this presentation were collected predominantly from two sources: The Virginia Plan for Higher Education, its accompanying Institutional Statistical Profile, and related documents provided by SCHEV and Virginia State Government Offices for years prior to 1974; and the Statistical Abstract of Higher Education in North Carolina and related documents provided by UNC General

Administration and North Carolina State Government Offices.

The raw data were entered into the "Condescriptive" procedure of SPSSX and sorted by "state", "year" and "institution". Following this initial review, the data were grouped utilizing the "Report" procedure of SPSSX, by "primary mission", "state", and "year." Finally, data were re-grouped according to ratios among certain categories, and again sorted by "primary mission", "state", and "year."

Both "A Classification of Institutions of Higher Education" (Carnegie, 1980) and "SREB-State Data Exchange Definitions of Institutional Categories" (Myers, 1984) were considered as a means of ranking institutions as to primary mission. Based on outputs of individual institutions in each state, a revised methodology for comparative purposes was utilized [see Appendix E].

North Carolina and Virginia institutions of similar outputs were ranked as to primary mission based on a one through four scale. The scale reflected primary missions by research/doctoral granting, graduate degree granting, and predominantly undergraduate degree granting. A fourth, two-year institution category was excluded for all but initial summary purposes.

The data for each state were compared by statewide coordinating agency from 1967 through 1982, a period extending to and following the 1972 advent of the consolidated governing board system in North Carolina and

the advent of a strengthened and regulatory SCHEV in 1974. This is an important time period for both Statewide agencies - a period of growth and enhancement of their authority encompassing educational system growth and the subsequent period of financial and enrollment entrenchment in which the agencies find themselves today. The same outputs for the North Carolina system institutions were examined for the period prior to and following the enactment of the consolidated governing board system. This study of North Carolina's system and its comparison with the statewide coordination agency of Virginia provides the basis for questioning the relative performance of coordinating versus consolidated governing board agencies in the two states. It seeks to relate agency functions, structure and organization to the issue of control as imposed on institutional autonomy. The utilization quantifiable data along with agency background provides the opportunity for examining the agencies against a different background than has been usual. No studies were identified which utilized the output of students served or graduated as a measure for examining the relative effectiveness of statewide coordination agencies.

Statistical outcomes of and information concerning the agencies and their system functions were reviewed and are reported in Chapter IV in response to the questions posed by this study.

Information and insights concerning the statewide agency missions, functions, and structure were gathered through visits, interviews, and correspondence with the statewide agency administrative offices in Richmond and Chapel Hill.

CHAPTER IV

REVIEW OF ISSUES AND RELATED DATA

This chapter presents background information on the statewide agencies in Virginia and North Carolina, explaining their history and current operations. Related data gathered from the two agencies are also presented in summary fashion.

The North Carolina Board of Governors

Composed of all public institutions of higher education conferring baccalaureate level or higher degrees, the University of North Carolina was first authorized by the State Constitution in 1776 and chartered in 1789 by the General Assembly. From those beginnings on the Chapel Hill campus in 1795, the state has since established fifteen additional senior institutions. For the purposes of this study, the North Carolina School of the Arts was excluded as atypical of senior institutions. In 1969 the University included six constituent institutions, with a single Board of Trustees. This system was first established in 1931 and included campuses at Chapel Hill, Raleigh and Greensboro [at the time a woman's college]. In 1960 three additional campuses joined the system with institutions at Charlotte, Asheville, and Wilmington. Regional campuses originally separate from the Universiy of North Carolina system were added to the system in 1971 bringing the total of campuses

to sixteen [including the School of the Arts]. Institutional locations and primary missions are shown as Appendix E.

The previously designated Board of Trustees for the six campus system was redesignated as the Board of Governors and serves by law as a thirty-two member board charged with "general determination, control, supervision, management, and governance of all affairs of the constituent institutions." Their chief executive officer is the President of The University of North Carolina (Board of Governors, 1984).

Each individual institution of The University of North Carolina system has a board of thirteen trustees, eight of whom are elected by the Board of Governors, four appointed by the Governor, and the elected president of each student body, serving ex officio. The powers of these boards are delegated by the Board of Governors which exercises, under constitutional terms, virtually exclusive control with regard to the affairs of the University System. Information concerning the statutory establishment of the system and its responsibilities is included as Appendix C.

The purposes of higher education for the North Carolina system were defined by the General Assembly in the 1971 redefinition of the University System:

1. To extend the benefits of education;
2. To improve the quality of eduation; and
3. To encourage an economical use of the States's resources (Board of Governors, 1981).

According to the Long Range Planning document (1981) the Board of Governors at its first meeting in 1972 delegated authority to each individual Board of Trustees for institutional personnel, student admissions standards, awarding of academic and honorary degrees, property control of values less than $50.000, campus security, intercollegiate athletics, traffic and parking, management of endowments and trust funds, student affairs and services, student aid, the management of auxiliary enterprises and utilities and several other matters. This, according to the Plan, enables the necessary degree of differentiation among the institutions. Statutes do permit the Board of Governors to delegate differentially among institutions whenever such action is deemed appropriate. The Chancellor of each institution is also elected by the Board of Governors on nomination of the President of the system, choosing from among two or more candidates recommended to him by the Board of Trustees of the institution. The Chancellors and President serve at the pleasure of the Board of Governors.

The system has grown based on institutions already in existence at the senior level. Many of the campuses added after 1964 have grown physically and with additional programs although with the exception of medically related doctorates at East Carolina University, no new doctoral granting institutions have been added. Program offerings at the doctoral and first professioal level are almost

exclusive to the original three campuses of the system. Doctoral or research missions are limited to the institutions at Chapel Hill, Raleigh and Greensboro. East Carolina University's School of Medicine does offer six doctorates but these are discounted in the designation of doctoral granting institutions (Appendix E).

North Carolina State University in Raleigh and North Carolina Agricultural and Technical State University at Greensboro are the state's two land-grant institutions. Though it is unusual for a state to have two land-grant institutions, the Greensboro campus was for many years considered essentially a "Black" institution and was hence the component land-grant college for that population. Greensboro is the site of an additional public institution, The University of North Carolina at Greensboro, originally a woman's college and currently a doctoral granting university, offering programs through the doctorate degree. All institutions which comprise the system entered the University as public, senior institutions. Professional programs are offered at North Carolina Central University in Durham, at North Carolina State University in Raleigh, at the University of North Carolina at Chapel Hill and at East Carolina University in Greenville, which shares with Chapel Hill one of the states two public schools of medicine.

General Administration for the University system is located in Chapel Hill. Functions remaining from the Board

of Higher Education and new staff moved to Chapel Hill offices from Raleigh, the state capitol, in 1972 following the adoption of the sixteen campus Board of Governors consolidation. General Administration is composed of the operations and professional staff for the Board of Governors of the University system and is headed by the President. The current President of the University, William Friday, has served continuously in that capacity since the inception of the consolidated system in 1971. Prior to that time he served as President of the six campus university system. Throughout the evolution of the University System to its present form, continuity of personnel and inter-organizational processes between the system administration and its public and political environments have a long and effective history. The recollections of those who came to Chapel Hill from Raleigh at the time of the 1971 consolidation lend an organizational saga to the General Administration which a totally new administrative creature might have lacked (Balfour,1985).

The creation of the Board of Governors and the sixteen branch University of North Carolina in 1971 provided the basis for a major political struggle, involving the executive and legislative branches of the state government as well as the University of North Carolina Administration and individual campuses. This struggle was resolved with the present University system by a series of compromises

resulting in the current configuration of the Board of Governors, selection of Friday as President of the system and location of the administrative offices for the system at Chapel Hill (Betts, 1976; Cline, 1971, 1972, 1975, 1976).

Major political issues which have arisen for the system since its inception number three: 1) a continuing dialogue with the Civil Rights Division of the United States Department of Health, Education and Welfare which has currently been resolved through a consent decree which binds the university to progressively increase the role of Blacks in all areas of the University System while taking steps to dissolve the traditional status of de facto all white-all black institutions; 2) the establishment of a second medical school at East Carolina University in Greenville, the first funding of which was appropriated for the 1975-1976 Biennium; and 3) the establishment of the School of Veterinary Medicine at North Carolina State in Raleigh, following a controversy in which the University system was charged by some with racial motives in the asignment of the facility to a predominantly white campus. To date, the University system offers approximately 250 degree programs and operates on general fund appropriations for the current biennium in excess of seven hundred million dollars.

As mandated by law, the Board of Governors has developed a long-range plan for the development of the University System, which has been updated by the Board annually since

its inception in 1976. The current long-range plan is inclusive of a five-year period. The plan, utilizing A Classification of Institutions of Higher Education (Carnegie, 1980), indicates a system composed of research universities at Chapel Hill and Raleigh, and an additional doctoral granting university at Greensboro, six comprehensive universities and colleges I, and six comprehensive universities and colleges II. No exclusively liberal arts colleges are listed under this classification system, though UNC-Asheville and Winston Salem State offer no graduate or first professional degrees and Elizabeth City State, Fayetteville State and UNC-Wilmington offer less than ten master's degrees and graduated fewer than 25 master's candidates as recently as 1982. To more clearly compare degree outputs, the Carnegie system was disgarded in favor of the categories described in Appendix E.

Although no complete program inventory is available for historical purposes, the system may be presented in light of the present program inventory as described by the General Administration (UNC Board, 1981; UNC General, 1984). This description shows a cluster of research and doctoral granting institutions in the Central Piedmont of North Carolina. Within a five-county area are grouped all institutions with doctoral-granting authority. Within this same region is one of the two other institutions which grant first professional degrees. Though it might be argued that

this five county area constitutes a major population concentration, no such cluster exists in the Charlotte, North Carolina area, a major metropolitian base of population.

Among these clustered institutions are included the primary professional programs in medicine, veterianary medicine, engineering, and law, as well as the doctoral-granting programs for the entire system. [The designation of professional programs in both states was frequently unclear and confused baccalaurate degree in professions with postbaccalaureate or first professional degrees. For the purposes of this study, the term "professional degree" always refer to the postbaccalaureate level]. In other institutions of the system, nondoctoral but including graduate degree programs, there is a major focus on programs in education with a secondary focus in base courses in liberal arts and social sciences. Indeed, were the education programs to be removed from these nondoctoral granting institutions, their program offerings would be weakened substantially. It is the master's level programs in education which provide much of the graduate degree status to these institutions. The map included as Appendix E demonstrates primary mission and location for each of these institutions.

The purposes of higher education established in 1971 have been restated by the Board of Governors Long Range Plan

(1981) as follows:

> [1] to provide access to higher educational opportunities for its citizens [2] through a well-planned and coordinated system of higher education which is [3] effective and efficient and [4] responsive to special educational needs.

The State Council of Higher Education for Virginia

Responsible for the regulatory coordination of 15 public senior institutions of higher education in Virginia, The State Council of Higher Education for Virginia [SCHEV] traces the orgins of its institutions to 1693 and the chartering of the nation's second oldest collegiate institution, The College of William and Mary. Though originally a private institution, William and Mary was reorganized in 1888 and moved toward public support which was accomplished in 1906. By this time, the state's first public university, the Univerity of Virginia, which had opened in 1825, had been joined by four other institutions, each with a distinct mission for education of the citizens of the state. Moving toward a system of educational institutions within proximity of students' geographical locations, a system of "branch colleges" opened between 1917 and 1960. Six of these institutions evolved into four-year institutions as part of Virginia's senior pubic institutions. Forecasting a rapid growth in enrollments and programs, the General Assembly in 1956 created a statewide coordinating board with advisory powers (SCHEV, 1974). Enactment legislation is included as Appendix D of this

dissertation.

The 1956 creation of SCHEV established it as a coordinating council for the then eleven state-supported higher education, four-year institutions. The Council consisted of nine members, eight appointed by the Governor, the Superintendent of Public Instruction serving ex officio. SCHEV was charged with assembling data, aiding the boards and officers of the institutions in developing a coordinating system, and, upon prior approval of the Governor, to limit any institution in the addition of curriculum offerings, and to receive and make recommendations concerning institutional budgets, original copies of which were to be submitted to the Governor no later than thirty days later. SCHEV was specifically prohibited from preventing institutional representatives direct access to the General Assembly and its committees, and from impairing the Boards of Visitors of the constitutent institutions except as specifically noted in the above duties (Acts of Assembly, 1956).

Heath's study of SCHEV's policy role (1980) outlines the growth in power, budget and staffing which slowly occurred between 1956 and 1974. In the latter year, the Council was recreated as a coordinating board with regulatory powers and moved from a situation of understaffing which, in 1956 saw a staff low of 2, to well over one hundred persons by 1977. In the recreation of the Council, criticism of the

weaknesses inherent in SCHEV's original structure were answered. Regulatory powers established included budget review and recommendation, specific approval of institutional long range plans, and authority to create and administer program inventories, which included recommendations on program approval for all institutions. The General Assembly resisted the recommendations of its own study commission's consultant, Donald Shaner and Associates. The Shaner Report recommended the establishment of a governing board similar to that of North Carolina. The role of the Shaner Report in shaping the Assembly's final revision of authority for SCHEV is unclear. The differences between the 1974 and 1956 SCHEV were the differences of required adherence to Council programming and planning dicta. The Council though regulatory rather than advisory with regard to a variety of concerns remained a coordinating agency with fifteen highly independent institutions which were guaranteed the right of direct approach to the legislative and executive branches (Heath, 198Ø).

SCHEV remains a coordinating agency rather than a governing board. Specific authority for operation and governance of the state senior higher education institutions remains in the hands of each institution,s Board of Visitors. Thus it is incorrect to think of Virginia institutions as a system in the University of North Carolina sense of the term. But the role of SCHEV is clearly

emerging as key to legislative and executive decision-making as indicated by Heath's 1980 study. Rather than a statutory authority, much of SCHEV's authority comes from the function, rather than the form, of its organization.

Administrative offices for SCHEV are located in the State Capitol of Richmond, in immediate proximity to legislative, executive and other state government offices. This proximity is seen by some staff as a major part of the Council's influence in decision-making, along with enhanced data-processing and information-gathering facilities on which both legislative and executive authorities rely for higher education and other state data (Dean, 1985).

The composition of the eleven member Council is viewed as vital to its success as a coordinating agency with regulatory powers. Political novices on the Council seem to accomplish little while those with a full sense of the possibilities inherent in the political process accomplish much. In this sense, the Council seems dependent on strong personalities at the expense, if necessary, of those with stronger academic credentials. It is the Director of the Council who acts as the prime spokesman and most visible policy maker of the agency, relating directly to the executive and a variety of legislative commitees (Heath, 1980; Dean, 1985).

Since its beginnings in 1956, the Council has employed

six directors, the last of which, Gordon Davies, was hired in 1977. Like the Board of Governors in North Carolina, the Council functions through the administrative staff which is headed by the Director. Staff continuity has been a recurring problem with the agency, an important consideration for a coordinating agency with a lay board of Council members who must depend on its excellence and information for their decision-making information. In recent years, since 1977, there has been an enhanced effort to attract qualified staff and to retain them with proper compensation and job security (Dean, 1985; Heath, 1980).

Political concerns in opposition to the authority of individual institutions have posed the major issues during SCHEV's growth and development. How much authority the agency should have, and the exercise of that authority to block new programs or expansion of the role and missions of certain institutions have continued to cause tension between SCHEV, the state government, and individual institutions. The Council continues in its role of enrollment projection approval, new program approval, review of existing programs for productivity and review of organizational changes. (Dean, 1985; Keating, 1985; SCHEV, 1983).

As mandated by statute, the Council each biennium issues an update of The Virginia Plan for Higher Education. An accompanying Statistical Profile relating to data on each of the 15 campuses is issued as a companion volume at this

time. The Plan encompasses a two-year update of six-year financial plans and ten-year enrollment projections, the latter for purposes of capital outlay planning and budgeting. Adjustments are made in the interim as necessary (SCHEV, 1983).

Institutional missions [assigned by this study according to outputs] and locations are shown in the map designated as part of Appendix E. Four institutions offer doctoral degrees. Three of these are designated as research institutions. Research institutions are located at Charlottesville [University of Virginia], Richmond [Virginia Commonwealth University], and Blacksburg [Virginia Polytechnic Institute and State University]. The additional doctoral-granting institution is The College of William and Mary, located in Williamsburg. These four institutions are clustered more loosely than in North Carolina, located at the perimeter of the Piedmont area and on the coastal plain. Only the extreme western and northern portions of the state are unrepresented by a doctoral-granting institution. In the remaining institutions the state offers a mix of professional, graduate, and liberal arts degree-granting institutions. Professional programs above the baccalaureate level are offered at the four doctoral institutions and in addition at George Mason University, located in Northern Virginia at Fairfax. Graduate programs are offered throughout the state with the exception of western Virginia

in which only a single liberal arts institution exists, Clinch Valley College of the University of Virginia. Of the Virginia institutions, a number were elevated to senior status from junior or two-year college levels including most notably Christopher Newport College, Clinch Valley College of the University of Virginia and George Mason University. George Mason is a notable example of what this study terms a "phased maturation" process in that it now exists with numerous graduate degree programs in Business, Education and Health as well as a professional degree program in its School of Law. It was established as a two-year institution in 1957 and subsequently granted senior status under the University of Virginia. In 1972 the institution was granted independent status by the state legislature.

Virginia too has institutions which, like North Carolina, seem to exist in direct competition with one another. Norfolk State College and Old Dominion University represent a parallel to the University of North Carolina at Greensboro and North Carolina A & T State University. Both of the Virginia institutions are located in Norfolk and Norfolk State College was originally an all-black institution. Neither institution grants the doctoral degree. In Virginia there is no parallel to the existence of two land-grant institutions found in North Carolina.

Virginia Commonwealth University, now designated as a research and doctoral-degree-granting institution, was the

product of a merger of the Medical College of Virginia and Richmond Professional Institute. This merger took place in 1968 in response to a perceived need for an urban institution in the Richmond area.

Though no specific program inventories for every degree were available for all years in Virginia, recent inventories provided in summary fashion by SCHEV suggest that the Virginia institutions rely on both education and business as major program efforts in their graduate institutions. While this program concentration is similar to North Carolina's education offerings, the addition of business programs and the distribution of research and doctoral institutions over a larger geographic region represents a different approach. Furthermore, Virginia's reliance on four institutions as predominantly liberal arts, four-year "colleges" [Christopher Newport, Clinch Valley, Mary Washington, and Virginia Military Institute] suggests a different program focus and mix for its institutions. The removal of education programs in Virginia would leave a large gap in the graduate program offerings of the institutions.

Collecting the Data

In the original design of this study it was anticipated that data would be collected for each of the fifteen institutions under study in the two states for a period of ten years prior to and ten years following 1972, the year of North Carolina's adoption of the governing board agency.

In the process of collecting and refining the data a number of discoveries were made which placed the original plan in question.

Differences between a coordinating board and a governing board, and Virginia's discontinuity of personnel and budgeting for SCHEV throughout its earliest years, raised serious concerns regarding the institutional methodology utilized in collecting and storing data. This situation was of less serious concern in North Carolina, where the Board of Higher Education had preceded the Board of Governors and maintained similar data collection procedures. But even in North Carolina much of the earliest data were missing or suspect. The ramifications of this discovery were of special interest to this study's expressed concern with control functions. These issues will be further discussed under conclusions in the final chapter of this study. For the purposes of the present chapter, it is noted that institutional research personnel at both SCHEV and General Administration expressed the view that data collected prior to 1967 were considered highly suspect. In this light, the scope of data collection was narrowed to the years 1967 through 1982.

A second difficulty which arose as the data collection proceeded concerned changes in what data were collected by the state agencies and how these data were measured. In some years, percentages were provided for certain

categories, while in subsequent years, data were found listed by totals. Certain needed data had either never been accumulated or had not been stored in institutional archieves. At both SCHEV and General Administration, much of the data requested had been originally provided for the Higher Education General Information Survey of the United States Government [HEGIS]. Some of this information had not been preserved by the agency or had been preserved in aggregate form rather than by individual institution. HEGIS tape data in many cases would fail to provide specific institutional information desired.

A third major concern arose with regard to budgetary appropriations, enrollment figures and the time sequence of their tabulation. Budgetary appropriations measured at the beginning of an academic year changed with variations in enrollment and legislative budgetary revisions throughout the year, especially with regard to state revenue shortfalls. It was important, in so far as was possible, to insure that the point of measurement or tabulation be as consistent as possible across years. In the case of published data collections, this could not always be assumed. This proved to be a special difficulty in Virginia where staff and budgetary changes did little to insure accuracy in the earlier years of SCHEV. In North Carolina, by contrast, both continuity of staff and budget and fortuitous circumstances such as a repetitive procedure of

data collection for institutional appropriations, assured better data at many points.

The original model of output analysis suggested for this study proved difficult to fulfill due to the unavailability of certain data. "Institution descriptors'" [see Figure 1, page 4] original inclusion of "appropriations as percentage of state budget" was found to be impractical to compute since the Virginia State Budget Office could not give concise general fund appropriations by year, but only by biennium. Even this material was not available via computer and the request for the material from staff was denied based on insufficient staff to generate the material. A search of the appropriate budget records was discouraged as unreliable based on changes in the budget preparation and presentation methodology within Virginia. North Carolina's recent political history with the election of the first Republican Governor since Reconstruction [James Holshouser], happened to lead to a request for the generation of just this needed information, according to the North Carolina Budget Office.

The number of institutions per system proved unimportant since each system was found to contain fifteen institutions of a senior level. This indicator was dropped in favor of "primary mission" indicators which proved more descriptive for comparison of institutions.

The percentage of faculty with a Ph.D. proved impossible to fulfill because Virginia had virtually no figures on this

indicator. Faculty at various ranks was not available for a number of years in Virginia.

"Appropriations per student enrolled" was chosen as the primary input indicator for this study over "appropriations per student graduated" because it was determined that both states utilized this figure in determing change figures for general fund appropriations. This information was generally, but not completely, available.

Of the "discretionary inputs" sought, the "number of professional programs" and "number of graduate degree programs" were generally found to be available although much of this information had to be extrapolated based on program inventories compiled after the fact. These later inventories contained start and stop dates for many programs but were judged to be suspect by the institutional research authorities of each system because of the reporting standards and procedures of earlier years. These inventories frequently did not suggest which health care programs, for example, represented M.D. degrees versus D.D.S. degrees. Graduate programs and professional programs were therefore listed by summaries per institution and level rather than by program category. Institutional research authorities at each state agency cautioned that individual institutional catalogues would be highly unreliable for such data and in some cases, not illustrative of the needed data.

"Faculty to student ratios" were calculated where

possible although "administration to student ratios" were impossible to calculate since little or no information was found presenting numbers of administrators per institution. Indicators on acceptances in ratio to population and graduates were dropped in favor of a ratio of "acceptances to applications" and "headcount enrollment by population" since both states emphasised that their service regions for institutions were in-state as well as out-of-state, and therefore not as relative to state populations. A more illustrative measure for the future would include acceptances within specificed service regions in-state, based on primary missions of each institution. This measure, if possible to calculate, might suggest meaningful data about availability of education to the population and respective diversity of institutions and their offerings.

Because information by specific program was usually aggregated for institutions, as in the case of health education programs referenced earlier, the outputs utilized were based on the number of students served by FTE and Headcount enrollment for regular session, full-time enrollment rather than by each program area. For similar reasons, the number of students graduated was shown by degree level rather than by specific program area.

With these considerations in mind statistical summaries of data were requested utilizing the SPSSX procedure for "Condescriptives." Following a review of this summary of

the data it was decided that no tests of significance, correlation or relationship would be advisible. Cases of missing data and even minor discrepancies in original data summaries could subtly alter such statistical procedures.

At this point in the review of data, the decision was made to consider the data in summary form, with the use of simple ratios where possible to illuminate possible areas of further investigation. Such summation would be useful in the reflection of long term trends or of major differentials in data. The summary of data was performed utilizing the "Report" procedure of SPSSX, which allowed data categories to be manipulated for comparative and summary review. Data are shown by summary of all years for each state [Appendix F], by "Report" procedure for selected variables [Appendix G], and by "Report" procedure for ratios as indicated above [Appendix H]. In these Appendices, data are shown by "mean" on the line so labeled. Variables which were found to be missing are labeled by a dot [.] within the listings and were not utilized in calculations by the SPSSX program. Figures for appropriations from general fund revenues were rounded to millions of dollars.

The results of the data presented while summative in nature, do raise interesting questions when taken in conjunction with the literature reviewed and

perceptions gained by the researcher in the fulfillment of this writing.

Summation of Entry Data

Original entry data on each system's institutions were collected through use of a form shown as Appendix B. The original entry data were then analysized through SPSSX utilizing the "Condescriptive" procedure which gave a listing of mean, range, minimum, maximum and sum for each of twenty-six variables. The listing was sorted by year and state but not by institution since the data analysis was to be summary in nature. The output of this procedure was then compared for each state to elicit trends and identify potential categories suitable for further comparison.

The number of missing variables found at this point in the analysis, in conjunction with the known uncertainties of the data already presented, led to the decision to utilize the data in the remaining analysis for descriptive and summary purposes.

The summary data obtained by this initial procedure [see Appendix F] were compared between the two states by year. Initial trends emerging from these data suggested reason for further analysis. Tuition, the number of professional programs offered, the number of professional program graduates, and FTE and headcount enrollment, all were lower almost uniformly for North Carolina versus Virginia across the sixteen-year period from 1967 to 1982. FTE and

Headcount enrollment were lower in North Carolina than in Virginia among graduate/liberal arts and research institutions while higher in doctoral granting institutions.

A striking difference between the two states was found in the area of the general fund appropriations specified for operations of SCHEV and General Administration. In all cases for which data were given in both states, North Carolina exceeded Virginia's appropriations by as much as two to four times [see Table 1]. Though funding totals for Virginia in this category were not shown for years before 1974, the known proportions of the political situation in Virginia at the time strongly suggest that funding totals would be even lower than for North Carolina during the comparable period.

Table 1

Comparative Annual Statewide Agency Budgets
General Fund Operations

	North Carolina	Virginia
1982	$8,023.000	3,096.000
1980	6,986,000	2,417,500
1978	5,010,000	2,412,015
1976	4,220,000	1,706,925
1974	3,608,000	1,622,460

Other summary data gave mixed impressions. Numbers of "associate" and "full professors", and "other" faculty as well as graduate programs ranged higher in years after 1974 for North Carolina. Data for acceptances and

applications reflected lower ratios in North Carolina for graduate/liberal arts oriented institutions while higher for doctoral and research institutions. Such figures may present findings relative to institutional selectivity. Degree totals averaged lower for graduate/liberal arts institutions in North Carolina but higher for doctoral and research institutions in the same period.

In an attempt to confirm or reject these preliminary perceptions concerning data trends, the SPSSX "Report" procedure was next utilized comparing institutional variables grouped by "primary mission", "year" and "state." This grouping reflected a concern for comparing institutions as nearly as possible with other institutions of similar program and mission.

"Report" Procedure Review One

During this facet of the review of data, variables were sorted as indicated above with means of variables for each category computed [see Appendix G]. The apparent trends suggested in the initial survey of raw data were examined in light of the report procedure. New information became apparent which raised further questions regarding the differences between Virginia and North Carolina institutions. For subsequent comparisons of institutions, two-year institutions were dropped from consideration. Three of the institutions in Virginia existed as two-year until 1970 and their presence was noted in the initial

summary data only. North Carolina has no such comparable institutions under the Board of Governors. Type three institutions which included predominantly undergraduate degree institutions showed a slight "skewing" of otherwise visibly smooth growth progressions for Virginia [Appendix G, p. 172]. In the time period from 1970 to 1977 means for FTE and headcount enrollment peaked, declined, and then began slowly, smoothly rising again.

Degree totals for Virginia demonstrated a similar performance among these institutions peaking only two years earlier, in 1973 [Appendix G, p. 177]. In North Carolina, for the same period, totals rose smoothly from lowest levels in 1967 through 1975 and into 1982 [Appendix G., p.178]. Since the more powerful version of SCHEV was adopted in 1974, the presence of trends in the years immediately following 1974 would be of significant interest for further study. Other institutional categories showed no such fluctuation. This performance may be related to Virginia's maturation of type-four, two-year institutions during this period to senior status.

The relation of graduate programs to professional programs in the two states was of interest as revealed by this review. Professional programs in Virginia exceeded those in North Carolina in research/doctoral institutions by almost two to one. However graduate programs in the same

institutions indicated that North Carolina was ahead by a lesser proportion [Appendix G, p. 173]. The comparability of graduate and professional programs and their relative geographic locations in each state will be pursued in Chapter Five.

Acceptances to applications means referenced in the initial summary of data were revealed as more uncertain when placed in summary by primary mission, state and year. No clear differences in this regard appeared in the report review.

Tuition in North Carolina was confirmed as lower than in Virginia by an average of almost one hundred dollars per academic period. Appropriations per institution when compared in the report procedure appeared almost identical for both North Carolina and Virginia in predominantly undergraduate [Appendix G, pp 189-190] and graduate degree institutions [Appendix G, pp 187-188] with North Carolina appearing an average of twenty percent lower among category one institutions than Virginia. However, differences in reporting procedures for the two states with regard to medical school appropriations and points at which data were tabulated in Virginia would render these findings suspect. University of North Carolina figures separated data for medical and other academic appropriations while Virginia did not consistently follow this pattern. Southern Regional Education Board data suggest support for the findings in

interviews with administrative personnel by this researcher to the effect that North Carolina institution's general fund operations appropriations on average exceed those of Virginia by a substantial sum each year.

"Report" Review Two

The second "Report" procedure review summarized the data once again according to "primary mission", "year" and "state". In this review ratios were calculated for percent of faculty at each rank, headcount enrollment per state population, percent of degrees by type, faculty to student ratio by FTE enrollment,state appropriations to institutions by state population, and FTE enrollment by state appropriation per institution. From these ratio comparisons [see Appendix H, p. 191] no changes from Report One trends were discovered. However, additional information was revealed by this review. It was found that faculty student ratios for institutions in both states were nearly equal in research and graduate degree type institutions [Appendix H, pp 202-201] for earlier, pre-1974 periods. These ratios increased slightly in North Carolina in the latter half of the study period. Faculty/student ratios for research/doctoral granting institutions were found to be nearly equal for both states. These findings may relate to the issue of professional versus graduate degree programs pursued in Chapter Five.

The distribution of state appropriations per institution

in ratio to state population [Appendix H., pp 201-203] suggested that the two states were approximately equal in category-three primary mission institutions while Virginia expenditures increased and surpassed North Carolina's by this measure for category-two and one primary mission institutions. These figures reflect the previously suggested bias of such data concerning the reporting of health care education expenditures versus general academic expenditures. State appropriations compared with FTE enrollment suggested declining expenditures for both states with slightly higher expenditures for North Carolina institutions.

Findings Related to Data Reviews

The findings which were revealed through the summary and review of these data were of more value for questions raised than for what was quantitatively demonstrated.

Tuition was confirmed to be lower in North Carolina than in Virginia. The comparison of graduate programs and professional programs demonstrated that North Carolina led in graduate degree programs while Virginia showned a pronounced lead in the establishment of professional programs.

The importance of such information relates directly to a broad range of issues including tuition and institutional access, system versus institutional vitality and the economics of eduation which are addressed in Chapter V's

conclusions.

Each of the above perceived differences may be important in determining the course of further research, especially as regards the goals of these state institutions, and by implication the goals of their statewide agencies, in so far as those agencies control such variables as tuition or influence the legislative appropriation process. As measures of intent regarding the decision process of administration with regard to goals such as accessibilty to education they may prove of use in future research. The trend differences found suggest intentional management of resources for selected outputs.

If planned incremental change is the option of both agencies, we might assume that institutional differences in discretionary inputs and outputs reflect this planned change. If institutional differences are not related to this planned change, than what is the basis for such institutional differences and how do these differences relate to statewide agency goals and purposes? These issues and their implications for the questions of control and autonomy will form the basis for the Summary and Conclusions of Chapter V.

It is the view of this researcher that the summaries of data which resulted from this research present the most representative long-term statistical picture which can be drawn with available information and procedures. It is

unlikely, given the findings of the literature review and the experiences gained through the process of gathering the present data, that substantially improved statistical information could be provided even if different categories were chosen for data collection. Historical data of the sort requested for this research was, by common admission of those interviewed during this project, the most difficult and least reliable to find and utilize. Survey instruments and the careful documentation of findings remain highly dependent upon the practices, care and intent of those providing responses. Data will always be viewed through the perceptions and purposes of those who provide it to researchers.

The unavailability of data and its inaccessibility for the researcher, politician or layperson presents serious issues concerning how data has been utilized or may be utilized in decision making and planning. These concerns are further explored in Chapter Five.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this research was to compare the two statewide coordinating agencies of higher education in Virginia and North Carolina. It was hoped that such a study would provide a basis for a clearer understanding of these agencies and their roles with respect to the constituent institutions under their authority.

Summary

The importance of the study related to the need for a better definition of what constitutes the functional difference between a coordinating board with regulatory powers and a governing board with constitutional authority. These differences were presumed to exist based on literature which suggested differing categories for such agencies and the heated debate which accompanied both the creation of these agencies in Virginia and North Carolina and the on-going discussion of the mission of such agencies relative to institutional autonomy and governmental control in higher education.

The issue of accountability, expressed in the establishment of such agencies remains a much debated topic. Presumably these agencies insure accountability of systems and institutions to their publics. This study sought to examine the outputs of institutions as a reflection of

differing approaches of the two statewide agencies. It was further the concern of the study to examine what exchange occurred between institutional autonomy and governmental control functions exercised by these agencies. A corollary to these concerns related to how well the functions of these agencies as described in their establishment legislations matched their actual practices as measured by both quantitative and subjective analysis.

The primary difficulty posed in accomplishing this task concerned describing and evaluating the effect of the agencies on their constituent institutions. The study of these agencies and their institutions as systems in an organizational sense was chosen as the basis for approaching this task. The systems model chosen involved the use of output analysis, a subset of systems thinking in which the outputs of systems are viewed as essential to understanding the functioning of the systems. The output analysis model also required the study of inputs and the relationship of inputs to system outputs via the feedback loop.

The choice of output analysis as a model for studying these statewide agencies demanded an understanding of the agencies and their functions. This was accomplished through extensive readings in the fields of educational program and system evaluations; the literature of systems theory as applied to higher education; and the purpose, structure and control of multicampus state systems of higher education

within statewide coordinating agencies. The review of literature contained in Chapter II of this research demonstrated that while educational program review and system evaluations have been recognized as crucial to understanding the role of statewide agencies, no clear agreement has been found on the proper method of such evaluation. The review of systems theory literature found a basis for the application of systems thinking to large scale bureaucracies but not specific research related to such applications in the study of statewide coordinating agencies. The field of literature related to the study of multicampus systems within statewide coordinating agencies was rich with works related to the issues of control, function and institutional autonomy. This literature demonstrated the importance of further study of these issues in seeking a clearer understanding of the relationship of institutions to their statewide agencies and the functional missions of those agencies.

The study of these agencies through the system of output analysis also demanded the identification and evaluation of system outputs, inputs and their relationship, if any, to the respective statewide agencies. The methodology for the establishment of these inputs and outputs as variables, and their collection was documented in Chapter Three. A system of indicators was established based upon interviews with faculty, staff and others related to higher education and

the review of relevant literature. These indicators were collected for sixteen years spanning the adoption of both the governing board for North Carolina higher education and the statewide coordinating agency with regulatory powers in Virginia.

The collection of these data and their subsequent summary analysis led to a decision to reduce the reliance upon data for the purposes of this study, based upon missing and suspect data for some categories. The absence of data and the unreliability of certain existing data demonstrated striking characteristics relative to the data gathering capabilities and operational functions of the two statewide agencies. This development further focused the concern of this study on the question of control functions exercised by these statewide agencies. In questions three and four the study became more narrowly concerned with the effect of the statewide agencies upon system resources and outputs and the relationship of agency control functions to institutional autonomy within statewide systems.

Chapter Four dealt with an examination of the statewide agencies as to creation, structure and function. Following this, the chapter provided a summary and review of the quantitative data which had been collected. Differences which were apparent were judged to be the result of the decision-making process within each state, that is, a matter of policy intent rather than random happening. This again

focused the concern of the study upon the relationship between institutions and statewide agencies. A major difference which emerged from the data review showed highly disparate funding levels between the operations appropriations to each state agency with North Carolina averaging between two and four times higher than Virginia in funding levels. The final focus of the study was therefore somewhat altered from its origins.

Conclusions

Under the original research questions, the first inquired as to the existence of measurable and comparable outputs of multicampus educational systems.

The study found that there were measurable outputs of multicampus educational systems. The selection of these measures remains a subject of debate. It is this researcher's opinion that the selection of students as primary indicators of institutional outputs remains highly desirable. While students are certainly not the only outputs of educational institutions, it can be safely asserted that without their presence as outputs, the institutions would cease to exist as we know them. This is not intended as a simplistic judgment. There remains much debate as to the major role and function of educational institutions. The selection of students as primary output indicators represents an acknowledgement and commitment to the view that the first function of higher education

institutions remains the education of student populations of those institutions. This in no way denigrates the contribution of other educational functions of these institutions. Equally important is the encouragment of continued research into the long-term effects typified by the term "outcome assessment." The major concern which developed during this research was related to the availability, and more important, the reliability of data. The data requested by this study reflected concerns which would be basic to appropriation and planning decisions within institutions and other state agencies.

To whom and in what form are such data available? The present research found that the statewide agencies did not have many of the requested categories of data in usable form. This researcher was told that "some" of the requested data were available from HEGIS [Higher Education General Information Survey] data maintained by the National Center for Educational Statistics, but generally in aggregate form. Institutional researchers at both statewide agencies discouraged reliance on individual institutional records, suggesting that these records reflected inconsistent and nonstandardized collection procedures. If this suggestion concerning institutional collection of data is accurate and not simply a conceit on the part of the statewide agencies, then where are individual institutional data to be obtained? Are decisions affecting individual institutions made based

on aggregate data rather than on the basis of a clear understanding of individual institutional data? If so, this suggests that individual institutions will slowly be shaped to reflect the average institutional performance. Any emphasis on institutional diversity may slowly be eroded. The suggestion raised by such speculation is that individual institutions survive at the expense of their individuality in highly centralized systems.

Question Two inquired as to the relationship of primary resources to outputs of component institutions in the two statewide systems.

Because of missing or questionable data as previously outlined, it was not deemed feasible to demonstrate statistical relationships between primary resources and outputs. Other than simple ratio relationships, no statistical significance could be reliably determined from the existing data. These ratio relationships proved useful only as general indicators of long term trends in identifying certain new variables and summary statistics for inter-institutional comparisons. These ratios and the summary data obtained were compared with aggregate data from recent SREB reports and found to be reflective in almost every case of trends identified nationally by the SREB reports. Differences between the collected data and SREB report trends were attributed to the previously cited weaknesses in existing data and different reporting periods

and measures between the SREB aggregate reports and those of this study.

The data collected raised the question as to whether, across sixteen years of data the apparent differences of consequence in summary data between Virginia and North Carolina institutions of comparable mission resulted from intent or chance.

Statements of each statewide agency's purposes and goals suggest missions to provide accountability, the achievement of excellence among institutions, and accessibility of educational programs for the people of each state. In short, both agencies are committed to institutional management which facilitates planning toward purposeful development, with little left to chance.

If we assume that existing differences, as suggested by the purpose and goal statements of each agency, result from planned intents, the relation of the agency to institution inputs and outputs must be questioned. This was the original focus of question three.

Question Three asked how the statewide agencies affect their institutional inputs and outputs?

The speculative answer to this question is based upon a cautious view of the limited summary data. The agencies as portrayed by their purpose and goal statements seemingly act with similar intents on their institutions. Whether their influences are negative, positive, or virtually ineffective

cannot be determined with the present research. What can be surmised is that the relative cost of this control, whatever its disposition with regard to qualitative concerns, increases with the level of formal control exercised by the statewide agency. These costs have been found to be relatively much higher in North Carolina than in Virginia.

This is in no manner intended as a judgment of either system or administration quality. In North Carolina there is more money spent for control of public higher education than is apparently the case in Virginia. The question which must be posed is how this control is exercised and whether its exercise is of benefit to the institutions.

In Question Four, inquiry was made into the relationship of controls exercised by statewide agencies over resources and outputs to institutional autonomy within the statewide systems.

The personnel interviewed at SCHEV administration and the documents from that office reviewed for this research suggested that the major control functions exercised by the statewide agency, a coordinating board with regulatory powers, resulted from nonquantifiable factors. The leadership of the agency in the person of the Director; the staff funding and expertise; the location of the agency offices in proximity to the executive and legislative state offices; the timely intervention in political questions; and the availability of data and analysis capability at critical

legislative junctures--all contributed to an exercise of authority and control over institutional actions which is belied by the title "coordinating board with regulatory powers." These are functions which the enactment legislation did not detail, and yet, they are attributed as reasons for the survival and prosperity of SCHEV by staff, government administrators, legislators and even institutional personnel.

In North Carolina, what are the parallel conclusions? There has been no such in depth study of the policy role of UNC General Administration. The findings of the current research suggest several lines for further inquiry. North Carolina expends a substantial sum yearly for control of higher education public institutions. In exchange, the state receives control and a relative isolation of institutions from political pressure. But is the control as complete as either those who proposed the governing board system had hoped, especially with regard to political influences, or as threatening to institutional autonomy as some have feared?

The General Administration performs administrative control in a stable and predictable fashion. The control function apparently works well, but what might occur without controls? Once again, speculation is all that is available. Would institutions have emerged stronger and more streamlined, with less overlap based on traditional patterns

of funding and program enrollment? Would some institutions not have survived? All that can be asserted with certainty is that the exercise of control is well performed under the present system operation.

In the collection of data for this research, it quickly became apparent that the presence of a central, well funded General Administration had resulted in far greater quantities of data being generated by institutions on a more reliable schedule and with greater accuracy of measurement than was found over an equal period of time in Virgina. There, sporadic funding and staffing coupled with the inability of all parties to agree upon the form and need for statewide coordination was clearly demonstrated in a disarray of data and record-keeping procedures for the pre-1974 years of SCHEV's existence. It is only in recent years, from 1979 onward, that agency stability seems to have become the rule rather than the exception. In North Carolina the available data suggested again that the exercise of control functions was well performed. Are the collection of data and their accurate repositing along with oversight system administration and control functions worth the investment of tax dollars? The answer depends on the availability of data and the use to which data are placed as well as other demonstrated functions of benefit to the institutions.

Control functions can have the effect of closing system

functions to necessary exchanges with their environment, a part of which is clearly the political process. In the case of SCHEV and Virginia, the institutions, staff of SCHEV and political leadership have all been recorded as suggesting that SCHEV constitutes a healthy balance between control of the system, institutional autonomy, and free exchange with the system environment. Whether stated as providing for diversity, institutional autonomy or reasonable accountability, the control functions of SCHEV must be perceived as more subtle than those of the Board of Governors, both from a legal as well as a functional standpoint.

By state statute, the control functions of the Board of Governors through UNC General Administration must be perceived as far less subtle. Reporting procedures for various functions and responsibilities for major decision making are statutorialy defined as Board of Governor concerns. All authority for the major budgetary and program decisions resides with the Board of Governors to administer through its General Administration or Boards of Trustees as is deemed appropriate. The political process is nonetheless far from isolated from institutional concerns. The process is by statute routed through the filter of General Adminstration, but as the concerns raised during 1985 concerning levels of SAT Scores required for admission of atheletes to system institutions and the attempt to reset

tuition levels in economic downturns demonstrates, politics continues to play a part in higher education in North Carolina, despite an extensive exercise of control functions by the statewide agency.

The management and decision-making process of public higher education, and indeed, of most large-scale bureaucracies, must be viewed as incremental in nature. We do not expect to find major departures or innovations in such a process. But to the extent that Virginia and North Carolina, through the statewide coordinating agencies, have chosen differing paths in the decisions which have been made on behalf of institutions, the impact of the statewide agency upon the decision process must be questioned.

Virginia has apparently chosen growth of educational institutions through the inclusion of branch colleges of larger institutions. These branch institutions have been rapidly upgraded to liberal arts or graduate degree granting status under SCHEV's authority. North Carolina has chosen growth of educational institutions through utilization of existing four-year institutions which were categorized as "comprehensive universities" immediately after the consolidation of 1971.

The two states differ in the apparent discretionary inputs and outcomes of their constitutent higher education institutions. The location of both research and doctoral institutions, as well as graduate/liberal arts institutions,

suggests much about the relative availability of program offerings to a wider population. Virginia's programs are generally distributed more widely than are those of North Carolina [see Appendix E].

The differences between professional offerings and graduate offerings in the two states suggests significant questions as well. In practice, the provision of graduate programs would be far less expensive than the provision of certain professional schools . Law schools, as professonal programs, would be relatively inexpensive while schools of medicine would be among the most expensive to operate. Selected graduate programs such as nuclear engineering would be expensive to fund but the majority of graduate programs in education offered by both states would be rather inexpensive.

Virginia operates two public university schools of medicine under SCHEV's authority, three schools of law, and two schools of advanced engineering in which substantial doctoral work is offered. North Carolina offers two public schools of medicine, two law schools, and two schools of advanced engineering--North Carolina State and North Carolina A & T State University. North Carolina surpasses Virginia in the provision of graduate degree programs. Virginia exceeds North Carolina in the provision of professional programs. But the graduate programs which give North Carolina its lead derive largely from schools of

education. What is being provided in the way of diversity, cost effectiveness, and accessibility may be argued.

The unavailability of program inventories with specific detail for all but the most recent years, the accompanying lack of costing data per each academic program make it impossible to make such judgements on a quantitative basis. Yet such information should certainly be considered a primary component of long-range planning and institutional governance.

In addition to programs at the professional and graduate levels, tuition and appropriations to education combine to indicate one component of a state's committment to educational opportunity. But issues of available financial aid, combined with the previously discussed institutional location and accessibility also determine educational opportunity. The presentation of data reflecting lower tuition and higher appropriations to institutions do not guarantee that North Carolina provides greater access to educational opportunities.

One function of statewide governance is to insure excellence and quality, in educational programs to the citizens of the state. The control authority of a centralized agency such as the General Administration of the University of North Carolina in theory operates to limit variance from prescribed levels of performance. But what are these levels? How are educational opportunity and

institutional diversity guaranteed?

In Virginia, a greater latitude for decisions regarding these issues is left to the individual institutional Boards of Visitors. In North Carolina, little latitude for such decisions is provided at the local level, and primary decision authority is left with the system Board of Governors.

A quantitative relationship between the exercise of control fuctions by statewide agencies and the autonomy of the institutions within such control has proven elusive. Yet control itself is exercised on an imaginary continuum which might be conceived as running from a point of total laissez faire wherein institutions exist in a Darwin-like struggle for survival to totalitarian authority in which no exercise of institutional autonomy is permitted. In systems thinking, this might be envisioned as ranging from a number of totally independent systems with little or no relationship, or laissez faire to a tightly closed system, perhaps a totalitarian model, in which no outside communication with the environment is permitted resulting in eventual entropy and death.

March and Cohen (1974) have suggested that academic institutions represent something in the midpoint of these analogies, functioning as "organized anarchies". The institutions are perceived as organized, but not in the traditional sense of the term, with authority and system

flow more sporadically exercised and acknowledged. If this view is accepted, there would be considerable argument in favor of some level of external control. The suggestion has been cited earlier in this work (Corson, 1974) that such control in educational settings might be categorized by the relative vitality which it encourages in constitutent institutions. Thus it may be proposed that, to the extent statewide agencies encourage vitality, or the negentropy/life state of healthy, open systems, they are of benefit to the institutions.

In Virginia, institutional vitality is guaranteed in at least one respect: access to direct exchange with the political environment is provided through statute that allows each institution to appeal directly to the legislative or executive in policy matters, independent of SCHEV. In North Carolina, no such access is provided, and indeed, one of the strengths of the system was perceived by the legislature as guaranteeing a single voice for public higher education through the Board of Governors.

Insuring the accountability of institutional components has been frequently forwarded as another exercise of control functions for statewide agencies. From the viewpoint of business or political leadership, this accountability is naturally considered in terms of some quantity of return on investment, or output measures compared with input resources. Educators are typically concerned, by contrast,

with process issues, or, what goes into the final product. The processes of education, in this view, become more critical from the classroom vantage point, than the immediate outputs. Educators would be more concerned with longterm outcomes of the process than with immediate, and more easily quantifiable outputs. Outputs will be recognizable on a balance sheet; outcomes and processes will not be so easily identifiable. The resolution or bridging of this natural dichotomy can be viewed as an exercise of control authority by statewide agencies, in part educational and in part political creations.

In the discovery of differences between graduate programs and professional programs in the two states, Virginia was found to have far more professional programs while North Carolina led in graduate programs. But the two types of programs are not, as has been discussed, financially comparable. Simply counting programs, rather than defining program content and costs is an effective means of obscuring the central issue of control: having traded institutional autonomy for system security, it is far too simple to answer inquiries concerning quality with responses couched in mere quantitative terms. The process of counting programs rather than assessing quality based on meaningful, consistent data, results in a variety of compromises.

Compromises which meet the needs of all parties in

higher education must resolve the philosopy of education which, at its best, seeks intellectual excellence, with the tradition of management accountability which seeks economy of means and maximization of results, or cost effectiveness. The compromise of these two values is achieved by statewide agencies through the practice of consensus among interest groups. According to Mayer (1974) such consensus is obtained by agreement upon goals which satisfy the most broadly representative population base. This eventually dilutes the political power of any one group of interests, leaving popular control more dispersed but less effective and exposing unrepresented interests to potential sacrifice.

Mayer (1974) argued that as control increases, consensus is utilized less. Organized change is achieved at the expense of wider participation in the decision making process. As an evaluation of statewide agency control functions, it may be asserted that to the extent control authorities assume responsibility for ultimate decisions, they have moved that much further along the continuum toward closed systems. When this movement reaches the point of closing the system to its environment, the control function becomes a detriment to the constitutent institution.

North Carolina's educational system has moved closer to the closed system model than has been the case in Virginia. This is reflected in the decision authority of each statewide agency, the access provided for institutional

access to the political process, and the growth patterns of the individual institutions under the authority of the agencies.

Decision-making in public higher education will always contain an aspect of political process. What is perceived as the goal for programs in their initiation will frequently change as a result of the political process indicated above. The decision-making processes of state higher education organizations considered in a systems analysis, will be more difficult to define than those in a business management environment. Eyler(1984) has suggested that the delivery of complex human services typical of higher education is highly dependent upon an environment in which the key organizational goals must be supported from the lowest level of the academic heirarchy to the top, rather than from the top down. A balance must be achieved between institutional autonomy wherein lies the ability to create such an environment, and the need for some level of public accountability.

Pike and Stritch (1974) previewed a society in which the demand for accountability results in the granting of state monopolies on control to agencies in return for the recogition of ultimate political authority over the monopoly. The exercise of control authority by the agency becomes a basic contractual relationship which may little reflect the goals or purposes of educational institutions so

long as the contract is fulfilled. Individual institutions would be guaranteed survival at a maintenance level while competition would be totally eliminated in favor of control. To the extent that such control on the part of statewide agencies sacrifices the ability of individual institutions to foster the environment of goal consensus among those charged with the delivery of human services, the control function becomes detrimental to the institution.

There is no clear indication that control functions have reached this level in either statewide agency under study. Does North Carolina, by its tight cluster of potentially competing institutions in the Piedmont area provide guaranteed survival through central control in exchange for the sacrifice of real institutional diversity and growth which might result from competition? It may be questioned whether such institutional survival represents a political or an educational response to the environment.

Virginia has shown a similar tendency to rely on a seemingly small number of institutions for major program focuses. But these institutions and their adjacent and smaller neighbors in Virginia's public higher education program appear to offer professional, doctoral and liberal arts programs which are more diverse. These programs appear more widespread geographically. Their establishment seems reflective generally of educational need rather than merely political pressure. This is most apparent in the

phased maturation of institutions such as Christopher Newport College and George Mason University. No such phased maturation is seen in the immediate elevation to comprehensive university status among North Carolina's regional universities in 1971.

The relationship of statewide agency control functions to institutional autonomy may be defined by the measures suggested above. In the view of Dressel and Faricy (1972), coordination can be a means of obtaining efficiency and economy in state educational enterprises. The opposing view suggests that state authorities are "making uniform rules and regulations" and "applying them in blanket ways" that ultimately remove decision making from the hands of individual institutions (Waternbarger, p.5, 1974).

Statewide agencies and the governments which enact them are faced with the responsibility of balancing state needs for accountability with the demonstrated necessity of reasonable institutional autonomy. Virginia, through its choice of coordination with regulatory control, has chosen the path of decreased formal control while exercising a de facto control, in many instances at a cost to taxpayers that is far below that of North Carolina's statewide agency. North Carolina, through its choice of a governing board, has chosen the path of increased formal control, exercising de jure control at a relatively higher cost to taxpayers than in Virginia. The further evaluation of that control and

its effects is highly recommended.

Recommendations

1. It is recommended that the review of institutional outputs be further pursued as a means of establishing relative performance among statewide systems of differing types.

Such research may require substantial funding and extended research at individual campuses. If past performance is impossible to establish based on such data, then data should be collected concurrent with each year's academic programs for a period of some years. Such research may not be the practical area for future doctoral research until such difficulties can be resolved.

2. An in-depth analysis of the policy role of the Board of Governors of the University of North Carolina is highly recommended as a means of understanding the relationship of that organization to the cost of its maintenance and its constitutional and statutory mission.

Such a dissertation has been in part provided for SCHEV by Heath (1980). Though it does not fully answer the question of control versus autonomy and its qualitative corollaries, it suggests that control of Virginia institutions relative to the statewide agency is a more subtle function than might otherwise be suspected from the descriptive information regarding SCHEV.

3. A further quantitative and qualitative study of the relationship between control and institutional autonomy, perhaps on the regional or national level would be of major service to the educational/political structure. Such a study might be based on evaluation of agencies based on the following criteria established by the current research:

a. the extent to which statewide agencies encourage vitality or exchange with their environment;

b. the extent to which control authorities at the statewide level assume responsibility for ultimate decisions in educational systems;

c. the ability of individual institutions within statewide agencies to foster the environment of goal consensus among those charged with the delivery of educational human services.

4. A study of the relationship between beginning levels of statewide agency control and subsequent increases in control functions is recommended as a means of understanding the decision process by which statewide agency authority is established.

5. A specific future study related to the current work should seek to portray the public senior institutions of North Carolina and Virginia relative to their current service areas, program inventories and degree outputs. Such measures might be established and data collected by an

established public agency for education similar to the Institute of Government in North Carolina. Data could thus be made available to institutions, appropriation agencies and other interested parties. Such a study would begin to portray the real measures of diversity and institutional independence within each state. Information of this type could well raise concerns regarding access to educational programs. The degree-granting process itself might be altered subsequently through an understanding of such data, resulting in a broader geographic distribution of degree programs among a reduced number of institutions.

The necessary data for such decision-making currently are unavailable in useable form. This raises the question of how institutional planning for program development and growth has proceeded? Has incremental change as reflected in FTE-driven changes in general fund appropriations become the single guiding force in the development of the statewide agency decision making and planning?

At some point, the decision must be made to utilize research on past performance in the development of new performance goals in an effort to depart from sheerly incremental thinking. This is the essence of systems theory as applied to complex organizations. The alternative to such thinking may well be the ultimate failure of our educational systems in the future.

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APPENDIX A

DEFINITION OF TERMS

The following definitions of terms are adopted for the purposes of this study:

Closed Systems Self-contained systems which are unaffected by other systems or their environment. All closed systems move toward entropy, a "death-state" of inertia (Immegart and Pilecki, 1973).

Coordinating Board with Regulatory Powers. "A board composed entirely or in the majority of public members and having regulatory powers in certain areas without, however, having governing responsibility for the institutions under its jurisdiction" (Berdahl, 1971).

Consolidated Governing Board. "A single governing board, whether fuctioning as the governing body for the only public senior institution in the state or as a consolidated governing board for multiple institutions, with no local or segmental governing bodies" (Berdahl, 1971). [Local boards of trustees such as exist in North Carolina are considered advisory to the Board of Governors on major issues of funding and long range planning, thus fitting within this categorization].

Discretionary Inputs. Allocation of Primary Inputs by the internal administration of the local institution for desired objectives.

Evaluation. A demonstration of the relationship between intervention and outcomes wherein proximate goals are measured against ultimate goals (Picus, in Pincus, 1980).

In education an evaluation study should be conducted and designed to assist some audience to judge and improve the worth of some educational objective (Scriven, Evaluation, 1983).

Institutional Descriptors. Descriptive information concerning individual institutions, useful in differentiating them by mission, size and budget.

Landgrant Colleges and Universities. A reference to institutions established with assistance of the Morrill Act of 1862 which provided grants of public lands to establish colleges to promote the science of agriculture to local farmers in the states (Rudolph, 1962).

Model A simplified definition of a real situation, built out of past experience and highly particularized, selective views of present information (Perrow, Complex Organizations, 1979).

Multicampus Universities. Public universities which utilize some form of centralized authority with satellite campuses at more than one location.

Open Systems. Those systems which exchange matter and energy with their environment. This interaction with the environment combats entropy and insures existance in a dynamic "life state," typilified by increasing order, differentiation, variation, and complexity (Immegart and Pilecki, 1973).

Outputs. Total numbers of students graduated by degree

program and total numbers of students enrolled without regard to degree program or graduation. A primary but not exclusive measure of institutional output.

Output Analysis. Specialized branch of systems analysis, holding that a system can best be studied by the results of its actions. It focuses on outputs, evaluation of output in terms of system goals, and subsequent feedback to the system as to alteration of operations to better achieve goals (Immegart & Pilecki, 1973).

Phased Maturation. Process by which institutions are gradually brought to senior status from two-year or junior college status. Implies a shift in program emphasis that is matched by additional funding and facilities to meet new program needs.

Primary Inputs. State appropriations to public institutions of higher education based on funding formulas approved external to the institution's local administration.

Professional Program. As used in the current study refers to programs at the post-baccalaureate in the professions of medicine, law, veteranary medicine.

Statewide Coordinating Agency. "The structure existing in an individual state which is responsible for the governance or coordination of higher education" (Frost, 1978).

Systems Analysis. The decomposition or dissection of a system [analysis] and resulting systems synthesis [often systems design] into another whole system (Immegart &

Pilecki, 1973).

System Theory. A level of theoretical model-building which falls between constructions of pure mathematics and specific theories of specialized disciplines; it forms "the skeleton of a science", seeking to integrate all sciences within a single conceptual framework (Bertalanffy, 1950, 1968 and Immegart & Pilecki, 1973).

APPENDIX B

SAMPLE DATA COLLECTION FORM

	VIRGINIA														
	Christopher Newport C.	Clinch Valley C.	George Mason U.	James Madison U.	Longwood C.	Mary Washington C.	Norfolk State C.	Old Dominion U.	Radford C.	U. of Virginia	Virginia Common. U.	Virginia Military Inst.	VPI & St.	Virginia State	William and Mary
State Budget															
No. Institutions/System															
State Population															
State Appropriations/Institution															
No. Faculty/Rank per Institution															
Professor															
Associate Professor															
Assistant Professor															
Instructor															
Lecturer															
Other															
Primary Mission of Institution															
Doctorate Granting															
Comprehensive University															
Liberal Arts College															
Two Year College & Inst.															
Prof. Schools/Specialized Inst.															
Institutions for Nontrad. Study															
Number of Professional Programs															
Number of Graduate Degree Programs															
Number of Administrators															
Acceptances/Applications															
Students Served FTE															
Students Served Headcount															
Students Graduated															
Doctoral															
Professional															
Masters															
Sixth Year															
Baccalaureate															
Other															

APPENDIX C

ENACTMENT LEGISLATION

THE UNIVERSITY OF NORTH CAROLINA

ARTICLE 1.

The University of North Carolina.

Part 1. General Provisions.

§ 116-1. Purpose.

In order to foster the development of a well-planned and coordinated system of higher education, to improve the quality of education, to extend its benefits and to encourage an economical use of the State's resources, the University of North Carolina is hereby redefined in accordance with the provisions of this Article. (1971, c. 1244, s. 1.)

Editor's Note. — Session Laws 1979, c. 340, s. 1, provides: "All laws or clauses of laws of a private, local or special nature as well as all statutes or provisions of statutes which specifically refer to The University of North Carolina at Chapel Hill and its environs, including the Town of Chapel Hill and the County of Orange, for the purpose of prohibiting or otherwise regulating the sale, barter, transportation, importation, exportation, delivery, purchase or possession of intoxicating liquors there and which conflict with any provision of Chapter

§ 116-11. Powers and duties generally.

The powers and duties of the Board of Governors shall include the following:

(1) The Board of Governors shall plan and develop a coordinated system of higher education in North Carolina. To this end it shall govern the 16 constituent institutions, subject to the powers and responsibilities given in this Article to the boards of trustees of the institutions, and to this end it shall maintain close liaison with the State Board of Community Colleges, the Department of Community Colleges and the private colleges and universities of the State. The Board, in consultation with representatives of the State Board of Community Colleges and of the private colleges and universities, shall prepare and from time to time revise a long-range plan for a coordinated system of higher education, supplying copies thereof to the Governor, the members of the General Assembly, the Advisory Budget Commission and the institutions. Statewide federal or State programs that provide aid to institutions or students of post-secondary education through a State agency, except those related exclusively to the community college system, shall be administered by the Board pursuant to any requirements of State or federal statute in order to insure that all activities are consonant with the State's long-range plan for higher education.

(2) The Board of Governors shall be responsible for the general determination, control, supervision, management and governance of all affairs of the constituent institutions. For this purpose the Board may adopt such policies and regulations as it may deem wise. Subject to applicable State law and to the terms and conditions of the instruments under which property is acquired, the Board of Governors may acquire, hold, convey or otherwise dispose of, invest and reinvest any and all real and personal property, with the exception of any property that may be held by trustees of institutional endowment funds under the provisions of G.S. 116-36 or that may be held, under authority delegated by the Board of Governors, either by a board of trustees or by trustees of any other endowment or trust fund.

(3) The Board shall determine the functions, educational activities and academic programs of the constituent institutions. The Board shall also determine the types of degrees to be awarded. The powers herein given to the Board shall not be restricted by any provision of law assigning specific functions or responsibilities to designated institutions, the powers herein given superseding any such provisions of law. The Board, after adequate notice and after affording the institutional board of trustees an opportunity to be heard, shall have authority to withdraw approval of any existing program if it appears that the program is unproductive, excessively costly or unnecessarily duplicative.

(4) The Board of Governors shall elect officers as provided in G.S. 116-14. Subject to the provisions of section 18 of this act [Session Laws 1971, Chapter 1244, section 18], the

Board shall also elect, on nomination of the President, the chancellor of each of the constituent institutions and fix his compensation. The President shall make his nomination from a list of not fewer than two names recommended by the institutional board of trustees.

(5) The Board of Governors shall, on recommendation of the President and of the appropriate institutional chancellor, appoint and fix the compensation of all vice-chancellors, senior academic and administrative officers and persons having permanent tenure.

(5a) [Expired.]

(6) The Board shall approve the establishment of any new publicly supported institution above the community college level.

(7) The Board shall set tuition and required fees at the institutions, not inconsistent with actions of the General Assembly.

(8) The Board shall set enrollment levels of the constituent institutions.

(9) a. The Board of Governors shall develop, prepare and present to the Governor, the Advisory Budget Commission and the General Assembly a single, unified recommended budget for all of public senior higher education. The recommendations shall consist of requests in three general categories: (i) funds for the continuing operation of each constituent institution, (ii) funds for salary increases for employees exempt from the State Personnel Act and (iii) funds requested without reference to constituent institutions, itemized as to priority and covering such areas as new programs and activities, expansions of programs and activities, increases in enrollments, increases to accommodate internal shifts and categories of persons served, capital improvements, improvements in levels of operation and increases to remedy deficiencies, as well as other areas.

b. Funds for the continuing operation of each constituent institution shall be appropriated directly to the institution. Funds for salary increases for employees exempt from the State Personnel Act shall be appropriated to the board in a lump sum for allocation to the institutions. Funds for the third category in paragraph a of this subdivision shall be appropriated to the Board in a lump sum. The Board shall allocate to the institutions any funds appropriated, said allocation to be made in accordance with the Board's schedule of priorities and in accordance with any specifications in the Budget Appropriation Act; provided, however, that when both the Board and the Director of the Budget (after the Director of the Budget consults with the Advisory Budget Commission) deem it to be in the best interest of the State, funds in the third category may be allocated, in whole or in part, for other items within the list of priorities or for items not included in the list. ~~Provided, nothing herein shall be construed to allow the General Assembly, except as to capital improve-~~

instruments, grants or other means or process by which any property right was acquired. In case a conflict arises as to which property, rights or privileges were held for the beneficial interest of a particular institution, or as to the extent to which such property, rights or privileges were so held, the Board of Governors shall determine the issue, and the determination of the Board shall constitute final administrative action. Nothing in this Article shall be deemed to increase or diminish the income, other revenue or specific property which is pledged, or otherwise hypothecated, for the security or liquidation of any obligations, it being the intent that the Board of Governors shall assume said obligations without thereby either enlarging or diminishing the rights of the holders thereof. (1971, c. 1244, s. 1.)

§ 116-13. Powers of Board regarding property subject to general law.

The power and authority granted to the Board of Governors with regard to the acquisition, operation, maintenance and disposition of real and personal property shall be subject to, and exercised in accordance with, the provisions of Chapters 143 and 146 of the General Statutes. (1971, c. 1244, s. 1.)

CASE NOTES

Cited in Roberson v. Dale, 464 F. Supp. 680 (M.D.N.C. 1979).

§ 116-14. President and staff.

(a) The Board shall elect a President of the University of North Carolina. He shall be the chief administrative officer of the University.

(b) The President shall be assisted by such professional staff members as may be deemed necessary to carry out the provisions of this Article, who shall be elected by the Board on nomination of the President. The Board shall fix the compensation of the staff members it elects. These staff members shall include a senior vice-president and such other vice-presidents and officers as may be deemed desirable. Provision shall be made for persons of high competence and strong professional experience in such areas as academic affairs, public service programs, business and financial affairs, institutional studies and long-range planning, student affairs, research, legal affairs, health affairs and institutional development, and for State and federal programs administered by the Board. In addition, the President shall be assisted by such other employees as may be needed to carry out the provisions of this Article, who shall be subject to the provisions of Chapter 126 of the General Statutes. The staff complement shall be established by the Board on recommendation of the President to insure that there are persons on the staff who have the professional competence and experience to carry out the duties assigned and to insure that there are persons on the staff who are familiar with the problems and capabilities of all of the principal types of institutions represented in the system.

(f) In electing boards of trustees to serve commencing July 1, 1973, the Board of Governors shall designate four persons for four-year terms and four for two-year terms. The Governor, in making appointments of trustees to serve commencing July 1, 1973, shall designate two persons for four-year terms and two for two-year terms.

(g) From and after July 1, 1973, any person who has served two full four-year terms in succession as a member of a board of trustees shall, for a period of one year, be ineligible for election or appointment to the same board but may be elected or appointed to the board of another institution.

(h) From and after July 1, 1973, no member of the General Assembly or officer or employee of the State or of any constituent institution or spouse of any such member, officer or employee shall be eligible for election or appointment as a trustee. Any trustee who is elected or appointed to the General Assembly or who becomes an officer or employee of the State or of any constituent institution or whose spouse is elected or appointed to the General Assembly or becomes such officer or employee shall be deemed thereupon to resign from his membership on the board of trustees.

(i) No person may serve simultaneously as a member of a board of trustees and as a member of the Board of Governors. Any trustee who is elected or appointed to the Board of Governors shall be deemed to resign as a trustee effective as of the date that his term commences as a member of the Board of Governors.

(j) From and after July 1, 1973, whenever any vacancy shall occur in the membership of a board of trustees among those appointed by the Governor, it shall be the duty of the secretary of the board to inform the Governor of the existence of such vacancy, and the Governor shall appoint a person to fill the unexpired term, and whenever any vacancy shall occur among those elected by the Board of Governors, it shall be the duty of the secretary of the board to inform the Board of Governors of the existence of the vacancy, and the Board of Governors shall elect a person to fill the unexpired term. Whenever a member shall fail, for any reason other than ill health or service in the interest of the State or nation, to be present for three successive regular meetings of a board of trustees, his place as a member shall be deemed vacant. (1971, c. 1244, s. 1.)

§ 116-32. Officers and meetings of the boards of trustees.

At the first meeting after June 30 of each year each board of trustees shall elect from its membership a chairman, a vice-chairman and a secretary. Each board of trustees shall hold not less than three regular meetings a year and may hold such additional meetings as may be deemed desirable. (1971, c. 1244, s. 1.)

§ 116-33. Powers and duties of the boards of trustees.

Each board of trustees shall promote the sound development of the institution within the functions prescribed for it, helping it to serve the State in a way that will complement the activities of the other institutions and aiding it to perform at a high level of excellence in every area of endeavor. Each board shall serve as advisor to the

Board of Governors on matters pertaining to the institution and shall also serve as advisor to the chancellor concerning the management and development of the institution. The powers and duties of each board of trustees, not inconsistent with other provisions of this Article, shall be defined and delegated by the Board of Governors. (1971, c. 1244 s. 1.)

CASE NOTES

Stated in Student Bar Ass'n Bd. of Governors v. Byrd, 32 N.C. App. 530, 232 S.E.2d 855 (1977).

§ 116-33.1. Board of trustees to permit recruiter access.

If a board of trustees provides access to its buildings and campus and the student information directory to persons or groups which make students aware of occupational or educational options, the board of trustees shall provide access on the same basis to official recruiting representatives of the military forces of the State and of the United States for the purpose of informing students of educational and career opportunities available in the military. (1981, c. 901, s. 3.)

§ 116-34. Duties of chancellor of institution.

(a) The chancellor shall be the administrative and executive head of the institution and shall exercise complete executive authority therein, subject to the direction of the President. He shall be responsible for carrying out policies of the Board of Governors and of the board of trustees. As of June 30 of each year he shall prepare for the Board of Governors and for the board of trustees a detailed report on the operation of the institution for the preceding year.

(b) It shall be the duty of the chancellor to attend all meetings of the board of trustees and to be responsible for keeping the board of trustees fully informed on the operation of the institution and its needs.

(c) It shall be the duty of the chancellor to keep the President, and through him the Board of Governors, fully informed concerning the operations and needs of the institution. Upon request, he shall be available to confer with the President or with the Board of Governors concerning matters that pertain to the institution.

(d) Subject to policies prescribed by the Board of Governors and by the board of trustees, the chancellor shall make recommendations for the appointment of personnel within the institution and for the development of educational programs. (1971, c. 1244, s. 1.)

CASE NOTES

Stated in Student Bar Ass'n Bd. of Governors v. Byrd, 32 N.C. App. 530, 232 S.E.2d 855 (1977).

APPENDIX D

ENACTMENT LEGISLATION

SCHEV

CHAPTER 543

An Act to amend the Code of Virginia by adding a section numbered 33.1-75.1, to provide special funds for the secondary highway system.

[H 578]

Approved April 8, 1974

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding a section numbered 33.1-75.1 as follows:

§ 33.1-75.1. Special funds for the secondary highway system.—From, and as a first priority of, allocations of State funds for the maintenance, improvement, construction or reconstruction of the system of State highways, the State Highway Commission shall make an equivalent matching allocation to any county whose governing body has designated up to, but not exceeding, ten per centum of funds received by it pursuant to "The State and Local Fiscal Assistance Act of 1972," hereinafter referred to as "Revenue Sharing Funds," for use by the State Highway Commission to construct, maintain or improve the secondary highway system within such county. Such funds appropriated by the State Highway Commission and such federal Revenue Sharing Funds shall be placed in a special fund, to be known as the "..... County secondary road fund," and shall be used solely for the purpose of maintaining, improving or constructing the secondary highway system within such county.

CHAPTER 544

An Act to amend and reenact § 23-9.3 as amended, and §§ 23-9.4, 23-9.5, 23-9.9 and 23-9.14 of the Code of Virginia; and to further amend the Code of Virginia by adding § 23-9.6:1; and to repeal §§ 23-9.6, 23-9.7, 23-9.11 and 23-9.12, as severally amended, of the Code of Virginia, relating generally to the creation of the State Council of Higher Education; the Council's duties, responsibilities and authority; and the Council's effect upon the powers of the public institutions of higher education.

[S 121]

Approved April 8, 1974

Be it enacted by the General Assembly of Virginia:

1. That § 23-9.3 as amended, and §§ 23-9.4, 23-9.5, 23-9.9 and 23-9.14 of the Code of Virginia are amended and reenacted and that the Code of Virginia is further amended by adding § 23-9.6:1 as follows:

§ 23-9.3. Creation and purpose; membership; terms; compensation.—(a) There is hereby created a State Council of Higher Education for Virginia, hereinafter sometimes referred to as the Council. The purpose of the Council shall be, through the exercise of the

powers and performance of the duties set forth in this chapter, to promote the development and operation of ~~a~~ *an educationally and economically* sound, vigorous, progressive, and coordinated system of higher education in the State of Virginia. The Council shall be composed of persons selected from the State at large without regard to political affiliation but with due consideration of geographical representation. Appointees shall be selected for their ability and all appointments shall be of such nature as to aid the work of the Council and to inspire the highest degree of cooperation and confidence. No officer, employee, trustee or member of the governing board of any institution of higher education, no employee of the Commonwealth, except the Superintendent of Public Instruction, or member of the General Assembly or member of the State Board of Education shall be eligible for appointment to the Council except as hereinafter specified. All members of the Council shall be deemed members at large charged with the responsibility of serving the best interests of the whole State. No member shall act as the representative of any particular region or of any particular institution of higher education.

(b) The Council shall consist of eleven members appointed by the Governor subject to confirmation by the General Assembly at its next regular session. Of the first members of the Council appointed by the Governor, two shall be appointed for terms of four years, two for terms of three years, two for terms of two years, and two for terms of one year; one of the appointments made during the year nineteen hundred seventy to increase the size of the Council shall be for a term of two years, one for a term of three years, and one for a term of four years. Successors to the persons so appointed shall be appointed for terms of four years. All terms shall begin July one. Appointments to fill vacancies occurring shall be for the unexpired term.

(c) No person having served on the Council for two terms of four years shall be eligible for reappointment to the Council for two years thereafter.

(d) Appointive members of the Council shall receive a per diem compensation in the amount set forth in § ~~14-29.1~~ *14.1-18* of the Code of Virginia for each day spent, and shall be paid their actual expenses incurred, in the performance of their duties as members of the Council.

(e) The Council shall elect a chairman and a vice chairman from its own membership and appoint a secretary and such other officers as it deems necessary or advisable, and shall prescribe their duties and term of office.

§ 23-9.4. Employment of personnel.—The Council ~~may employ~~ *shall employ and appoint a director who shall be the chief executive officer of the Council, and* such personnel as may be required to assist it in the exercise and performance of its powers and duties.

§ 23-9.5. Coordinating council for State-supported institutions of higher education.—The Council shall constitute a coordinating council for ~~the University of Virginia, Mary Washington College of the University of Virginia, the Medical College of Virginia, the Virginia Military Institute, Longwood College, Madison College, the College of William and Mary in Virginia, the Virginia State College, the Virginia Polytechnic Institute and Radford College, Woman's Division of the Virginia Polytechnic Institute~~ *the College of William and Mary in Virginia, George Mason University, Longwood College, Madison College, Mary Washington College, Norfolk State College, Old Dominion University, Radford College, the University of Virginia, Virginia Commonwealth University, Virginia Military Institute, Virginia Polytechnic Institute and State University,. Virginia State College and the Department of Community Colleges and the Department's comprehensive community colleges,*

branches ~~or~~, divisions *or colleges* of any of the foregoing, and such other State-supported institutions of higher education as may in the future be established.

§ 23-9.6:1. Duties of Council.—In addition to such other duties as may be prescribed elsewhere, the Council of Higher Education shall have the duty, responsibility and authority;

(a) To prepare plans under which the several State-supported institutions of higher education of Virginia shall constitute a coordinating system. In developing such plans, the Council shall consider the future needs for higher education in Virginia at both the undergraduate and the graduate levels, the mission, programs, facilities and location of each of the existing institutions of higher education, in addition to such other matters as the Council deems appropriate. The Council shall revise such plans biannually in each odd numbered year and shall submit within the time prescribed by § 2.1-54 of the Code of Virginia the plans as revised to the Governor and the General Assembly together with such recommendations as are necessary for their implementation.

(b) To review and approve or disapprove any proposed change in the statement of mission of any presently existing public institution of higher education and to define the mission of all public institutions of higher education created after the effective date of this provision. The Council shall, within the time prescribed in (a) above, make a report to the Governor and the General Assembly with respect to its actions hereunder; provided, however, no such actions shall become effective until thirty days after adjournment of the session of the General Assembly next following the filing of such a report. Nothing contained in this provision shall be construed to authorize the Council to modify any mission statement adopted by the General Assembly, nor to empower the Council to affect, either directly or indirectly, the selection of faculty or the standards and criteria for admission of any public institution, whether related to academic standards, residence or other criteria, it being the intention of this act that faculty selection and student admission policies shall remain a function of the individual institutions.

(c) To study any proposed escalation of any public institution to a degree granting level higher than that level to which it is presently restricted and to submit a report and recommendation to the Governor and the General Assembly relating to the proposal. The study shall include the need for and benefits or detriments to be derived from the escalation. No such institution shall implement any such proposed escalation until the Council's report and recommendation have been submitted to the General Assembly and the General Assembly approves the institution's proposal.

(d) To review and approve or disapprove all enrollment projections proposed by each public institution of higher education. The Council's projections shall be in numerical terms by level of enrollment and shall be used for budgetary and fiscal planning purposes only. The student admissions policies for the institutions and their specific programs shall remain the sole responsibily of the individual boards of visitors.

(e) To review and approve or disapprove all new academic programs which any public institution of higher education proposes. As used herein, "academic programs" include both undergraduate and graduate programs.

(f) To review and require the discontinuance of any academic program which is presently offered by any public institution of higher education when the Council determines that such academic program is nonproductive in terms of the number of degrees granted, the number of students served by the program and budgetary considerations. As used herein, "academic programs" includes both undergraduate and graduate programs. The Council shall make a report to the Governor and the General Assembly with respect to the discontinuance of any academic program; provided, however, no such discontinuance shall become effective until thirty days after the adjournment of the session of the General Assembly next following the filing of such report.

(g) To review and approve or disapprove the creation and establishment of any department, school, college, branch, division or extension of any public institution of higher education which such institution proposes to create and establish. This duty and responsibility shall be applicable to the proposed creation and establishment of departments, schools, colleges, branches, divisions and extensions whether located on or off the main campus of the institution in question; provided, however, that the Council does not have

authority to disapprove any organizational change proposed solely for the purpose of internal management where the institution's curricular offerings remain constant. Nothing in this provision shall be construed to authorize the Council to disapprove the creation and establishment of any department, school, college, branch, division or extension of any institution which has been created and established by the General Assembly.

(h) To develop a uniform comprehensive data information system designed to gather all information necessary to the performance of the Council's duties. Said system shall include information on admissions, enrollments, personnel, programs, financing, space inventory, facilities and such other areas as the Council deems appropriate.

(i) To develop in cooperation with the appropriate State financial and accounting officials and to establish uniform standards and systems of accounting, record keeping and statistical reporting for the public institutions of higher education.

(j) To review annually and approve or disapprove all changes in the inventory of educational and general space which any public institution of higher education may propose and to make a report to the Governor and the General Assembly with respect thereto; provided, however, no such change shall be made until thirty days after the adjournment of the session of the General Assembly next following the filing of such report.

(k) To visit and study the operations of each of the public institutions of higher education at such times as the Council shall deem appropriate and to conduct such other studies in the field of higher education as the Council deems appropriate or as may be requested by the Governor or the General Assembly.

(l) To provide advisory services to private, accredited and nonprofit institutions of higher education, whose primary purpose is to provide collegiate or graduate education and not to provide religious training or theological education, on academic, administrative, financial and space utilization matters. The Council may also review and advise on joint activities, including contracts for services, between such private institutions and public institutions of higher education or between such private institutions and any agency of the Commonwealth or political subdivision thereof.

(m) To adopt such rules and regulations as the Council believes necessary to implement all of the Council's duties and responsibilities as set forth in this Code. The various public institutions of higher education shall comply with such rules and regulations.

(n) In carrying out its duties and responsibilities, the Council, insofar as practicable, shall preserve the individuality, traditions and sense of responsibility of the respective institutions. The Council, insofar as practicable, shall seek the assistance and advice of the respective institutions in fulfilling all of its duties and responsibilities.

§ 23-9.9. ~~Institutions to transmit budget requests to Council; coordinating requests; submission to Governor.—~~ *Preparation of budget requests; submission of budget request to Council; coordinating requests; submission of recommendations to Governor and General Assembly.—The Council of Higher Education shall develop policies, formulae and guidelines for the fair and equitable distribution and use of public funds among the public institutions of higher education, taking into account enrollment projections and recognizing differences as well as similarities in institutional missions. Such policies, formulae and guidelines as are developed by the Council shall include provisions for operating expenses and capital outlay programs and shall be utilized by all public institutions of higher education in preparing requests for appropriations. The Council shall consult with the Division of the Budget and the Division of Engineering and Buildings in the development of such policies, formulae and guidelines to insure that they are consistent with the requirements of the Division of the Budget.*

Not less than thirty days prior to submitting its biennial budget request to the Governor, the governing board of each *public* institution of higher education ~~supported by the State~~ shall transmit to the Council ~~a duplicate original of~~ *such selected budgetary information relating to* its budget request for maintenance and operation and for capital outlay *as the Council shall reasonably require.* ~~In the light of these requests, and in the light of the needs of the State for higher education, the Council shall prepare an estimate of such needs for each year of the ensuing biennium, coordinating the budget requests for all the institutions but identifying the request of, and the proposed budget for,~~

~~each institution, and submit the same within the time preseribed by § 2-48 (§ 21-54) of the Code of Virginia to the Governor.~~ *The Council shall analyze such information in light of the Council's plans, policies, formulae and guidelines and shall submit to the Governor not later than thirty days after the institutions have submitted their full budget request recommendations for approval or modification of each institution's request together with a rationale for each such recommendation. After the executive budget has been presented to the General Assembly, the Council shall make available to the General Assembly its analyses and recommendations concerning institutional budget requests.*

Nothing herein shall prevent any institution from appearing through its representatives or otherwise before the Governor and his advisory committee on the budget, the General Assembly or any committee thereof at any time.

§ 23-9.14. Effect upon powers of governing boards of institutions.—The powers of the governing boards of the several institutions over the affairs of such institutions shall not be impaired by the provisions of this chapter except to the extent that powers and duties are herein specifically conferred upon the State Council of Higher Education. *The Council shall have no authority over the solicitation, investment or expenditure of endowment funds now held or in the future received by any of the public institutions of higher education.*

2. That §§ 23-9.6, 23-9.7, 23-9.11 and 23-9.12, as severally amended, of the Code of Virginia are repealed.

CHAPTER 545

An Act to amend the Code of Virginia by adding in Title 59.1 a chapter numbered 1.1, containing sections numbered 59.1-9.1 through 59.1-9.18, so as to create the Virginia Antitrust Act; to prohibit monopolistic conduct, and price discrimination; to grant to the Attorney General powers of investigation and enforcement; to provide penalties for violations; to prescribe duties for public officials; to authorize individuals to institute certain actions; to require confidentiality; and to authorize enforcement by the State or its political subdivisions; and to repeal Chapter 3 of Title 59.1, containing sections numbered 59.1-22 through 59.1-41, relating to trusts, combinations and monopolies.

[S 301]

Approved April 8, 1974

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Title 59.1 a chapter numbered 1.1, containing sections numbered 59.1-9.1 through 59.1-9.18, as follows:

CHAPTER 1.1.
Virginia Antitrust Act.

§ 59.1-9.1. This chapter may be known and cited as the "Virginia Antitrust Act."

§ 59.1-9.2. The purpose of this chapter is to promote the free market system in the economy of this State by prohibiting restraints of trade and monopolistic practices that act or tend to act to decrease competition. This chapter shall be construed in accordance with the legislative purpose to implement fully the State's police power to regulate commerce.

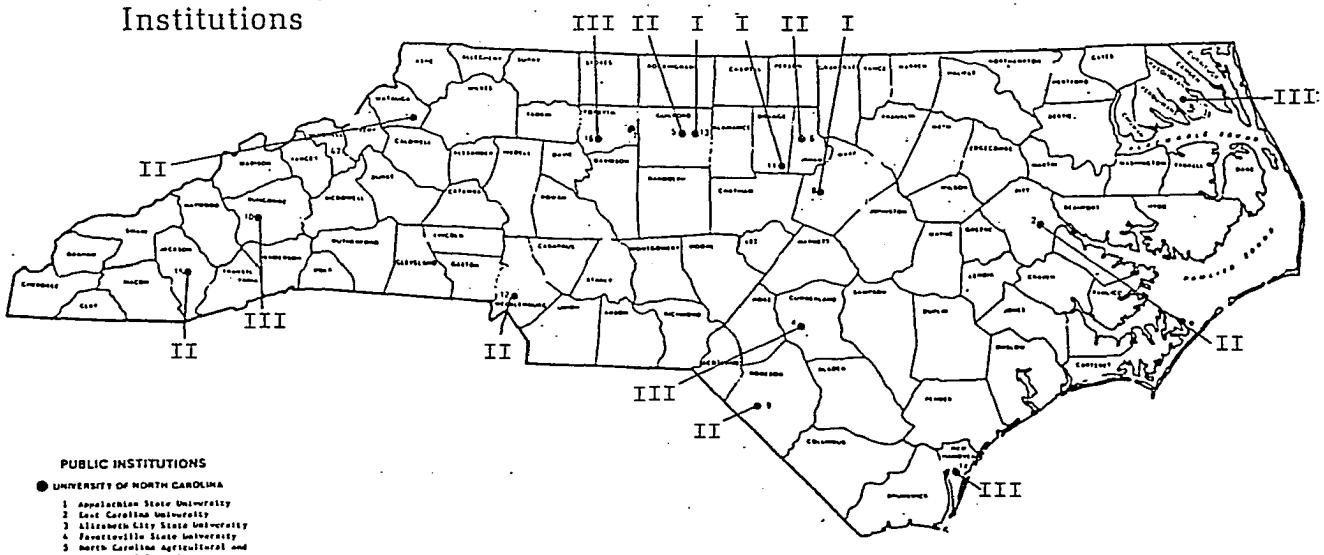
APPENDIX E

INSTITUTIONAL LOCATIONS AND PRIMARY MISSIONS

VIRGINIA AND NORTH CAROLINA

PUBLIC SENIOR INSTITUTIONS

NORTH CAROLINA
Post-Secondary Institutions

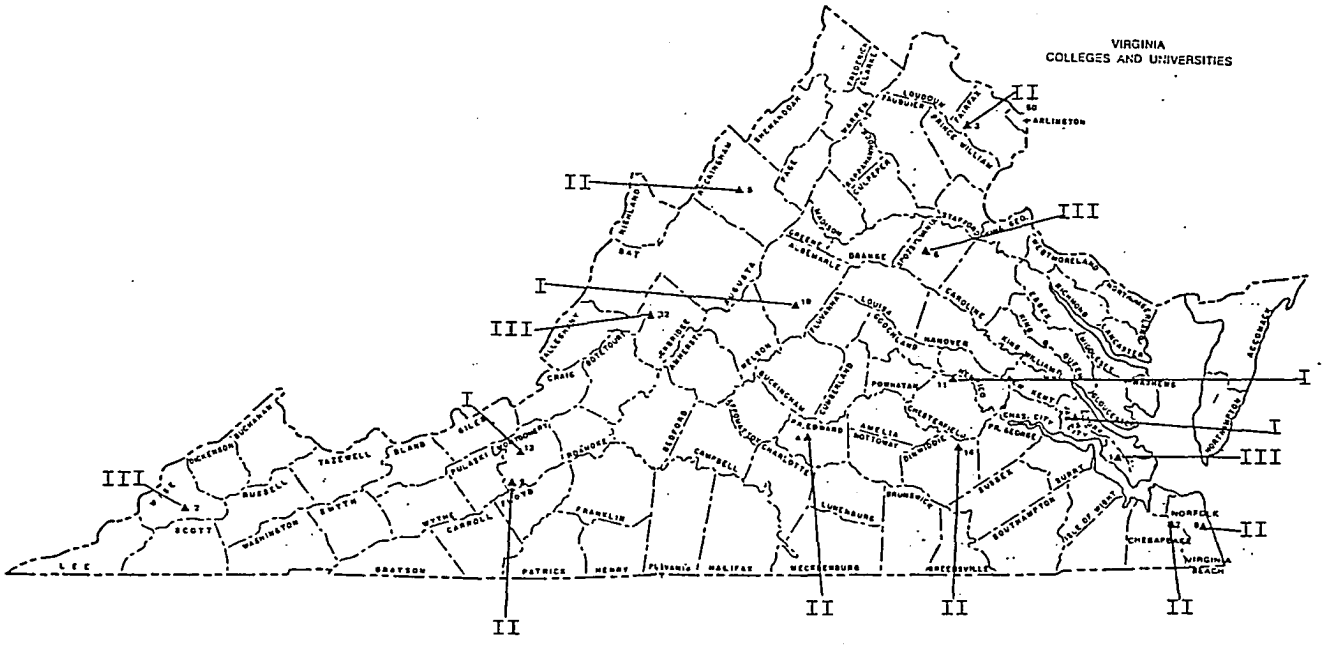


PUBLIC INSTITUTIONS

● UNIVERSITY OF NORTH CAROLINA

1 Appalachian State University
2 East Carolina University
3 Elizabeth City State University
4 Fayetteville State University
5 North Carolina Agricultural and Technical State University
6 North Carolina Central University
7 North Carolina School of the Arts
8 North Carolina State University at Raleigh
9 Pembroke State University
10 University of North Carolina at Asheville
11 University of North Carolina at Chapel Hill
12 University of North Carolina at Charlotte
13 University of North Carolina at Greensboro
14 University of North Carolina at Wilmington
15 Western Carolina University
16 Winston-Salem State University

Primary Mission
I = Research/Doctoral Granting
II = Graduate Degree Granting
III = Predominantly Undergraduate



PUBLIC INSTITUTIONS

▲ Four-Year Colleges and Universities

1. Christopher Newport College of The College of William and Mary, Newport News
2. Clinch Valley College of the University of Virginia, Wise
3. George Mason University, Fairfax
4. Lynchburg College, Lynchburg
5. Madison College, Harrisonburg
6. Mary Washington College, Fredericksburg
7. Northern Virginia College, Fairfax
8. Old Dominion University, Norfolk
9. Radford College, Radford
10. University of Virginia, Charlottesville
11. Virginia Commonwealth University, Richmond
12. Virginia Military Institute, Lexington
13. Virginia Polytechnic Institute and State University, Blacksburg
14. Virginia State College, Petersburg
15. The College of William and Mary, Williamsburg

Primary Mission

I = Research/Doctoral

II = Graduate Degree Granting

III = Predominantly Undergraduate

PRIMARY MISSIONS

For the purposes of this study, the following definitions of primary missions were used in the classification of institutions. For additional information on alternative classification systems see A classification of institutions of higher education: revised edition, December 1976 (Carnegie, 1980), and SREB-State data exchange definitions of institutional categories (Myers, 1984).

Research/Doctoral Granting. Agencies of a state which are granted authority for the granting of doctoral degrees in more than a single program area [i.e., medicine and literature], or grant doctoral degrees in a single area but are funded as primary research institutions by the state appropriation process.

Graduate Degree Granting. Authorized by statewide agency to grant degrees of a master's level and post-baccalaureate, including the first professional degree. Institutions in this category grant a minimum of 25 total master's degrees annually across ten or more program areas.

Predominantly Undergraduate. Senior institutions [at least four year institutions] which do not qualify in the above categories, and which grant baccalaureate degrees except as indicated above.

Two-year College/Institute. Institution offering no program

beyond the two year or associate degree level.

APPENDIX F

SUMMARY OF INSTITUTIONAL COMPARISONS BY PRIMARY MISSION, YEAR AND STATE

SUMMARY OF INSTITUTIONAL COMPARISONS
BY PRIMARY MISSION AND YEAR

MISSION	STATE	FTE ENROLLMENT	HEADCOUNT ENROLLMENT	DEGREE TOTAL	DOCTORAL	PROFESSIONAL	MASTERS	BACCALAUREATE	OTHER
4	VA MEAN	650.80	831.00	12.6000	0.00	0.00	0.00	0.00	12.60
3	NC MEAN	1721.41	1900.46	293.9556	0.00	0.00	1.24	292.71	0.00
	VA MEAN	2046.36	2292.16	314.9730	0.00	0.00	2.95	304.88	7.15
2	NC MEAN	5898.83	6435.56	1300.686	.11	7.85	299.22	993.33	.17
	VA MEAN	5615.15	6695.41	1135.621	7.51	11.78	220.07	886.89	9.38
1	NC MEAN	13575.62	15306.91	3172.844	176.89	132.73	713.31	2149.91	0.00
	VA MEAN	12073.63	13304.65	2854.431	104.84	189.17	686.34	1859.98	14.09

Primary Mission.
1 = Research/Doctoral Granting
2 = Graduate Degree Granting
3 = Predominantly Undergraduate
4 = Two Year College/Institute

Note: Other than for summary purposes, category four is excluded from all other comparisons. Category four institutions existed only in Virginia for the purposes of this study, and were upgraded to senior institutions after 1969. Richard Bland College, only lately added to Virginia's institutions under SCHEV, was not included in the study.

SUMMARY OF INSTITUTIONAL COMPARISONS
BY PRIMARY MISSION STATE AND YEAR

MISSION		STATE	FACULTY	PROFESSOR	ASSOCIATE	ASSISTANT	INSTRUCTOR	OTHER
4	VA MEAN		28.0000	1.00	4.00	14.00	8.00	1.00
3	NC MEAN		109.0444	20.11	21.49	40.53	22.59	4.32
	VA MEAN		113.0811	29.24	27.97	39.70	14.59	1.57
2	NC MEAN		349.1154	75.22	96.20	115.90	45.85	15.94
	VA MEAN		318.7083	63.13	84.38	128.12	39.31	3.77
1	NC MEAN		1078.867	333.20	274.71	293.29	94.69	82.98
	VA MEAN		720.0625	188.22	204.13	254.25	69.72	9.75

Primary Mission
1 = Research/Doctoral Granting
2 = Graduate Degree Granting
3 = Predominantly Undergraduate
4 = Two Year College /Institute

Note: Other than for summary purposes, category four is excluded from all other comparisons. Category four institutions existed only in Virginia for the purposes of this study, and were upgraded to senior institutions after 1969. Richard Bland College, only lately added to Virginia's institutions under SCHEV, was not included in the study.

SUMMARY OF INSTITUTIONAL COMPARISON
BY PRIMARY MISSION STATE AND YEAR

MISSION		STATE	PROFESSIONAL PROGRAMS	GRADUATE PROGRAMS	ACCEPTANCE_TO APPLICATIONS	TUITION	APPROPRIATION PER_INSTITUTION
4	VA MEAN		0.00	0.00	.8570	204.00	.44
3	NC MEAN		0.00	.71	.7742	428.58	3.46
	VA MEAN		0.00	.66	.8088	581.51	3.80
2	NC MEAN		.15	33.38	.7909	486.52	12.34
	VA MEAN		.06	23.00	.7656	580.07	13.76
1	NC MEAN		1.27	161.21	.6580	503.07	41.68
	VA MEAN		1.53	85.68	.5500	610.59	49.07

Primary Mission
1 = Research/Doctoral Granting
2 = Graduate Degree Granting
3 = Predominantly Undergraduate
4 = Two Year College/Institute

Note: Other than for summary purposes, category four is excluded from all other comparisons. Category four institutions existed only in Virginia for the purposes of this study, and were upgraded to senior institutions after 1969. Richard Bland College, only lately added to Virginia's institutions under SCHEV, was not included in the study.

APPENDIX G

INSTITUTIONAL COMPARISON OF VARIABLES BY PRIMARY MISSION, STATE AND YEAR

INSTITUTIONAL COMPARISONS OF VARIABLES
BY PRIMARY MISSION AND YEAR

YEAR	FTE ENROLLMENT	HEADCOUNT ENROLLMENT	YEAR	FTE ENROLLMENT	HEADCOUNT ENROLLMENT
1982 MEAN	14409.25	16142.00	1982 MEAN	15758.00	18106.67
1981 MEAN	14265.75	15941.50	1981 MEAN	15471.67	17674.67
1980 MEAN	13988.50	15785.50	1980 MEAN	15354.33	17588.00
1979 MEAN	13653.50	15572.25	1979 MEAN	14736.67	16741.67
1978 MEAN	13527.00	15294.50	1978 MEAN	14307.67	16152.33
1977 MEAN	13719.75	15005.50	1977 MEAN	14125.67	15882.67
1976 MEAN	13055.75	14650.00	1976 MEAN	13946.67	15643.00
1975 MEAN	12600.50	14291.75	1975 MEAN	14057.33	15822.00
1974 MEAN	12034.25	13687.00	1974 MEAN	13051.00	14820.67
1973 MEAN	11479.00	13173.25	1973 MEAN	12602.67	13836.33
1972 MEAN	11965.75	12249.50	1972 MEAN	12039.00	13481.33
1971 MEAN	11178.50	11530.25	1971 MEAN	11807.00	13208.67
1970 MEAN	9508.00	10575.50	1970 MEAN	11391.00	12724.33
1969 MEAN	9390.75	9832.00	1969 MEAN	12883.50	14560.50
1968 MEAN	8571.67	9107.00	1968 MEAN	12576.50	14098.50
1967 MEAN	7915.00	7548.33	1967 MEAN	12018.50	13223.00

Virginia North Carolina
Research/Doctoral

INSTITUTIONAL COMPARISONS OF VARIABLES
BY PRIMARY MISSION AND YEAR

YEAR	FTE ENROLLMENT	HEADCOUNT ENROLLMENT
1982 MEAN	6640.86	8261.43
1981 MEAN	6695.71	8256.29
1980 MEAN	6526.57	8004.14
1979 MEAN	6101.43	7649.71
1978 MEAN	6109.43	7310.43
1977 MEAN	6134.29	7256.71
1976 MEAN	5635.14	6866.14
1975 MEAN	5314.17	6595.33
1974 MEAN	5476.40	6608.20
1973 MEAN	4819.40	5882.40
1972 MEAN	5065.60	5495.60
1971 MEAN	4442.00	4940.40
1970 MEAN	4354.50	5154.75
1969 MEAN	4573.00	4876.00
1968 MEAN	5398.40	5671.60
1967 MEAN	4021.50	4514.50

Virginia

YEAR	FTE ENROLLMENT	HEADCOUNT ENROLLMENT
1982 MEAN	4911.92	5494.42
1981 MEAN	6646.71	7067.86
1980 MEAN	6589.29	7354.14
1979 MEAN	7123.83	7943.17
1978 MEAN	6231.00	6931.14
1977 MEAN	6869.00	7617.83
1976 MEAN	6886.50	7455.33
1975 MEAN	6705.67	7388.33
1974 MEAN	6276.50	7045.50
1973 MEAN	5881.83	6398.83
1972 MEAN	5776.33	6162.50
1971 MEAN	5419.17	5937.50
1970 MEAN	5496.20	5627.00
1969 MEAN	5181.00	5572.83
1968 MEAN	4992.17	5320.50
1967 MEAN	4287.43	4448.57

North Carolina

Graduate Degree Granting

INSTITUTIONAL COMPARISONS OF VARIABLES
BY PRIMARY MISSION AND YEAR

YEAR	FTE ENROLLMENT	HEADCOUNT ENROLLMENT
1982 MEAN	1842.00	2330.50
1981 MEAN	1779.75	2242.50
1980 MEAN	1720.00	2190.00
1979 MEAN	1657.50	2124.25
1978 MEAN	2050.50	2679.00
1977 MEAN	1691.50	2002.00
1976 MEAN	1612.75	1914.25
1975 MEAN	2398.00	2797.40
1974 MEAN	2214.83	2518.33
1973 MEAN	2134.83	2462.50
1972 MEAN	2303.17	2432.67
1971 MEAN	2228.67	2351.67
1970 MEAN	2054.71	2336.14
1969 MEAN	2141.50	2033.00
1968 MEAN	2161.00	2087.40
1967 MEAN	2179.40	1975.40

Virginia

YEAR	FTE ENROLLMENT	HEADCOUNT ENROLLMENT
1981 MEAN	2406.00	2751.80
1980 MEAN	2273.00	2593.60
1979 MEAN	2121.17	2406.33
1978 MEAN	2046.40	2126.40
1977 MEAN	2035.17	2256.67
1976 MEAN	1935.00	2124.00
1975 MEAN	1907.17	2100.00
1974 MEAN	1674.00	1819.50
1973 MEAN	1581.50	1695.67
1972 MEAN	1544.33	1643.50
1971 MEAN	1449.33	1551.83
1970 MEAN	1500.57	1811.14
1969 MEAN	1383.14	1513.86
1968 MEAN	1259.14	1350.86
1967 MEAN	1135.67	1227.67

North Carolina

Predominantly Undergraduate

YEAR	TOTAL DEGREES	DOCTORAL DEGREES	PROFESSIONAL DEGREES	MASTERS'	BACCALAU DEGREES	OTHER DEGREES
1982	14181.00	574	925	3231	9362	89
MEAN	3545.250	143.50	231.25	807.75	2340.50	22.25
1981	13856.00	520	942	3190	9191	13
MEAN	3464.000	130.00	235.50	797.50	2297.75	3.25
1980	13635.00	522	906	3287	8892	28
MEAN	3408.750	130.50	226.50	821.75	2223.00	7.00
1979	13550.00	493	891	3189	8968	9
MEAN	3387.500	123.25	222.75	797.25	2242.00	2.25
1978	13261.00	494	894	3152	8693	28
MEAN	3315.250	123.50	223.50	788.00	2173.25	7.00
1977	13390.00	487	888	3507	8472	36
MEAN	3347.500	121.75	222.00	876.75	2118.00	9.00
1976	12821.00	463	843	3253	8213	49
MEAN	3205.250	115.75	210.75	813.25	2053.25	12.25
1975	12938.00	474	850	3391	8197	26
MEAN	3234.500	118.50	212.50	847.75	2049.25	6.50
1974	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1973	11380.00	415	766	2849	7306	44
MEAN	2845.000	103.75	191.50	712.25	1826.50	11.00
1972	10277.00	337	758	2635	6448	99
MEAN	2569.250	84.25	189.50	658.75	1612.00	24.75
1971	9513.00	328	684	2253	6149	99
MEAN	2378.250	82.00	171.00	563.25	1537.25	24.75
1970	8810.00	367	608	2030	5706	99
MEAN	2202.500	91.75	152.00	507.50	1426.50	24.75
1969	8034.00	299	477	1782	5377	99
MEAN	2008.500	74.75	119.25	445.50	1344.25	24.75
1968	4794.00	100	171	718	3706	99
MEAN	1598.000	33.33	57.00	239.33	1235.33	33.00
1967	5117.00	208	369	1341	3199	0
MEAN	1705.667	69.33	123.00	447.00	1066.33	0.00

Virginia
Research/Doctoral
(sums are shown for each year, followed by mean for the year)

YEAR	TOTAL DEGREES	DOCTORAL DEGREES	PROFESSIONAL DEGREES	MASTERS'	BACCALAU DEGREES	OTHER DEGREES
1982	10886.00	553	484	2303	7546	0
MEAN	3628.667	184.33	161.33	767.67	2515.33	0.00
1981	10454.00	539	452	2275	7188	0
MEAN	3484.667	179.67	150.67	758.33	2396.00	0.00
1980	10287.00	507	416	2270	7094	0
MEAN	3429.000	169.00	138.67	756.67	2364.67	0.00
1979	9949.00	525	444	2248	6732	0
MEAN	3316.333	175.00	148.00	749.33	2244.00	0.00
1978	11004.00	544	499	2247	7714	0
MEAN	3668.000	181.33	166.33	749.00	2571.33	0.00
1977	10323.00	503	417	2273	7130	0
MEAN	3441.000	167.67	139.00	757.67	2376.67	0.00
1976	8026.00	477	414	2212	4923	0
MEAN	2675.333	159.00	138.00	737.33	1641.00	0.00
1975	9636.00	520	424	2113	6579	0
MEAN	3212.000	173.33	141.33	704.33	2193.00	0.00
1974	9268.00	544	294	2094	6336	0
MEAN	3089.333	181.33	98.00	698.00	2112.00	0.00
1973	9309.00	572	436	2056	6245	0
MEAN	3103.000	190.67	145.33	685.33	2081.67	0.00
1972	8970.00	557	371	1942	6100	0
MEAN	2990.000	185.67	123.67	647.33	2033.33	0.00
1971	8486.00	520	320	1960	5686	0
MEAN	2828.667	173.33	106.67	653.33	1895.33	0.00
1970	8137.00	499	278	1887	5473	0
MEAN	2712.333	166.33	92.67	629.00	1824.33	0.00
1969	6481.00	404	215	1538	4324	0
MEAN	3240.500	202.00	107.50	769.00	2162.00	0.00
1968	6334.00	381	260	1494	4199	0
MEAN	3167.000	190.50	130.00	747.00	2099.50	0.00
1967	5228.00	315	249	1187	3477	0
MEAN	2614.000	157.50	124.50	593.50	1738.50	0.00

North Carolina
Research/Doctoral
(sums are shown for each year, followed by mean for the year)

YEAR	TOTAL DEGREES	DOCTORAL DEGREES	PROFESSIONAL DEGREES	MASTERS	BACCALAU DEGREES	OTHER DEGREES
1982	9356.00	7	138	1761	7409	41
MEAN	1336.571	1.00	19.71	251.57	1058.43	5.86
1981	9358.00	6	142	1851	7359	0
MEAN	1336.857	.86	20.29	264.43	1051.29	0.00
1980	9309.00	7	382	1852	7025	43
MEAN	1329.857	1.00	54.57	264.57	1003.57	6.14
1979	8508.00	4	36	1691	6747	30
MEAN	1215.429	.57	5.14	241.57	963.86	4.29
1978	8533.00	5	28	1613	6834	53
MEAN	1219.000	.71	4.00	230.43	976.29	7.57
1977	8490.00	5	0	1731	6684	70
MEAN	1212.857	.71	0.00	247.29	954.86	10.00
1976	8039.00	4	0	1637	6333	65
MEAN	1148.429	.57	0.00	233.86	904.71	9.29
1975	7028.00	1	0	1512	5480	35
MEAN	1171.333	.17	0.00	252.00	913.33	5.83
1974	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1973	5531.00	0	0	1066	4411	54
MEAN	1106.200	0.00	0.00	213.20	882.20	10.80
1972	4878.00	0	0	894	3901	83
MEAN	975.6000	0.00	0.00	178.80	780.20	16.60
1971	4630.00	0	0	874	3685	71
MEAN	926.0000	0.00	0.00	174.80	737.00	14.20
1970	3731.00	0	0	728	2937	65
MEAN	932.7500	0.00	0.00	182.00	734.25	16.50
1969	3690.00	459	0	452	2712	67
MEAN	922.5000	114.75	0.00	113.00	678.00	16.75
1968	5496.00	155	299	1231	3720	91
MEAN	1099.200	31.00	59.80	246.20	744.00	18.20
1967	2222.00	0	0	253	1922	47
MEAN	555.5000	0.00	0.00	63.25	480.50	11.75

Virginia

Graduate Degree Granting
(sums are shown for each year, followed by mean for the year)

YEAR	TOTAL DEGREES	DOCTORAL DEGREES	PROFESSIONAL DEGREES	MASTERS	BACCALAU DEGREES	OTHER DEGREES
1982	11510.00	1	80	2359	9052	18
MEAN	959.1667	.08	6.67	196.58	754.33	1.50
1981	9909.00	0	38	2421	7450	0
MEAN	1415.571	0.00	5.43	345.86	1064.29	0.00
1980	9628.00	0	95	2265	7268	0
MEAN	1375.429	0.00	13.57	323.57	1038.29	0.00
1979	9558.00	0	45	2325	7188	0
MEAN	1593.000	0.00	7.50	387.50	1198.00	0.00
1978	9900.00	0	54	2538	7308	0
MEAN	1414.286	0.00	7.71	362.57	1044.00	0.00
1977	9721.00	0	54	2859	6808	0
MEAN	1620.167	0.00	9.00	476.50	1134.67	0.00
1976	9588.00	0	43	2816	6729	0
MEAN	1598.000	0.00	7.17	469.33	1121.50	0.00
1975	9229.00	0	110	2291	6828	0
MEAN	1538.167	0.00	18.33	381.83	1138.00	0.00
1974	8544.00	0	82	1815	6747	0
MEAN	1440.667	0.00	13.67	302.50	1124.50	0.00
1973	8584.00	0	65	1894	6625	0
MEAN	1430.667	0.00	10.83	315.67	1104.17	0.00
1972	8180.00	0	51	1632	6497	0
MEAN	1363.333	0.00	8.50	272.00	1082.83	0.00
1971	7369.00	0	33	1419	5917	0
MEAN	1228.167	0.00	5.50	236.50	985.17	0.00
1970	6074.00	0	19	1099	4956	0
MEAN	1214.800	0.00	3.80	219.80	991.20	0.00
1969	6895.00	3	24	1261	5607	0
MEAN	1149.167	.50	4.00	210.17	934.50	0.00
1968	6302.00	6	24	1248	5024	0
MEAN	1050.333	1.00	4.00	208.00	837.33	0.00
1967	5481.00	2	7	1176	4296	0
MEAN	783.0000	.29	1.00	168.00	613.71	0.00

North Carolina

Graduate Degree Granting
(sums are shown for each year, followed by mean for the year)

YEAR	TOTAL DEGREES	DOCTORAL DEGREES	PROFESSIONAL DEGREES	MASTERS'	BACCALAU DEGREES	OTHER DEGREES
1982	1246.00	0	0	5	1241	0
MEAN	311.5000	0.00	0.00	1.25	310.25	0.00
1981	1244.00	0	0	0	1191	53
MEAN	311.0000	0.00	0.00	0.00	297.75	13.25
1980	1180.00	0	0	0	1170	10
MEAN	295.0000	0.00	0.00	0.00	292.50	2.50
1979	1212.00	0	0	0	1200	12
MEAN	303.0000	0.00	0.00	0.00	300.00	3.00
1978	1184.00	0	0	0	1184	0
MEAN	296.0000	0.00	0.00	0.00	296.00	0.00
1977	1112.00	0	0	0	1092	20
MEAN	278.0000	0.00	0.00	0.00	273.00	5.00
1976	1106.00	0	0	0	1086	20
MEAN	276.5000	0.00	0.00	0.00	271.50	5.00
1975	1889.00	0	0	12	1790	87
MEAN	377.8000	0.00	0.00	2.40	358.00	17.40
1974	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1973	2270.00	0	0	36	2167	67
MEAN	378.3333	0.00	0.00	6.00	361.17	11.17
1972	2089.00	0	0	39	1988	62
MEAN	348.1667	0.00	0.00	6.50	331.33	10.33
1971	1820.00	0	0	22	1745	53
MEAN	303.3333	0.00	0.00	3.67	290.83	8.83
1970	2112.00	0	0	32	2020	60
MEAN	301.7143	0.00	0.00	4.57	288.57	8.57
1969	1800.00	0	0	20	1752	28
MEAN	300.0000	0.00	0.00	3.33	292.00	4.67
1968	1601.00	0	0	38	1537	26
MEAN	320.2000	0.00	0.00	7.60	307.40	5.20
1967	1443.00	0	0	14	1398	31
MEAN	288.6000	0.00	0.00	2.80	279.60	6.20

Virginia

Predominantly Undergraduate
(sums are shown for each year, followed by mean for the year)

YEAR	TOTAL DEGREES	DOCTORAL DEGREES	PROFESSIONAL DEGREES	MASTERS'	BACCALAU DEGREES	OTHER DEGREES
1981	1667.00	0	0	29	1638	0
MEAN	333.4000	0.00	0.00	5.80	327.60	0.00
1980	1574.00	0	0	24	1550	0
MEAN	314.8000	0.00	0.00	4.80	310.00	0.00
1979	2068.00	0	0	32	2036	0
MEAN	344.6667	0.00	0.00	5.33	339.33	0.00
1978	1745.00	0	0	3	1742	0
MEAN	349.0000	0.00	0.00	.60	348.40	0.00
1977	2204.00	0	0	0	2204	0
MEAN	367.3333	0.00	0.00	0.00	367.33	0.00
1976	2089.00	0	0	0	2089	0
MEAN	348.1667	0.00	0.00	0.00	348.17	0.00
1975	2008.00	0	0	0	2008	0
MEAN	334.6667	0.00	0.00	0.00	334.67	0.00
1974	1977.00	0	0	0	1977	0
MEAN	329.5000	0.00	0.00	0.00	329.50	0.00
1973	1863.00	0	0	0	1863	0
MEAN	310.5000	0.00	0.00	0.00	310.50	0.00
1972	1714.00	0	0	0	1714	0
MEAN	285.6667	0.00	0.00	0.00	285.67	0.00
1971	1542.00	0	0	0	1542	0
MEAN	257.0000	0.00	0.00	0.00	257.00	0.00
1970	2013.00	0	0	23	1990	0
MEAN	287.5714	0.00	0.00	3.29	284.29	0.00
1969	1667.00	0	0	1	1666	0
MEAN	238.1429	0.00	0.00	.14	238.00	0.00
1968	1440.00	0	0	0	1440	0
MEAN	205.7143	0.00	0.00	0.00	205.71	0.00
1967	885.00	0	0	0	885	0
MEAN	147.5000	0.00	0.00	0.00	147.50	0.00

North Carolina

Predominantly Undergraduate
(sums are shown for each year, followed by mean for the year)

YEAR	FACULTY TOTAL	PROFESSOR	ASSOCIATE	ASSISTANT	INSTRUCTOR	OTHER
1967	1852.00	428	424	635	300	65
MEAN	463.0000	107.00	106.00	158.75	75.00	16.25
1968	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1969	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1970	2921.00	728	792	964	390	47
MEAN	730.2500	182.00	198.00	241.00	97.50	11.75
1971	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1972	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1973	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1974	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1975	2825.00	705	778	1060	258	24
MEAN	706.2500	176.25	194.50	265.00	64.50	6.00
1975	2988.00	706	847	1124	283	28
MEAN	747.0000	176.50	211.75	281.00	70.75	7.00
1977	3269.00	810	918	1205	295	41
MEAN	817.2500	202.50	229.50	301.25	73.75	10.25
1978	3369.00	879	946	1213	292	39
MEAN	842.2500	219.75	236.50	303.25	73.00	9.75
1979	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1980	3483.00	978	1029	1165	273	38
MEAN	870.7500	244.50	257.25	291.25	68.25	9.50
1981	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1982	2527.00	789	798	770	140	30
MEAN	631.7500	197.25	199.50	192.50	35.00	7.50

Virginia

Research/Doctorate
(sums are shown for each year, followed by mean for the year)

YEAR	FACULTY TOTAL	PROFESSOR	ASSOCIATE	ASSISTANT	INSTRUCTOR	OTHER
1967	1907.00	551	432	438	251	235
MEAN	953.5000	275.50	216.00	219.00	125.50	117.50
1968	2320.00	726	633	617	191	153
MEAN	1160.000	363.00	316.50	308.50	95.50	76.50
1969	3010.00	779	668	811	468	284
MEAN	1505.000	389.50	334.00	405.50	234.00	142.00
1970	2890.00	839	746	851	371	83
MEAN	963.3333	279.67	248.67	283.67	123.67	27.67
1971	3490.00	941	766	947	406	430
MEAN	1163.333	313.67	255.33	315.67	135.33	143.33
1972	3527.00	981	740	945	427	434
MEAN	1175.667	327.00	246.67	315.00	142.33	144.67
1973	2793.00	856	665	841	337	94
MEAN	931.0000	285.33	221.67	280.33	112.33	31.33
1974	2337.00	733	577	655	271	101
MEAN	779.0000	244.33	192.33	218.33	90.33	33.67
1975	2424.00	765	612	658	297	92
MEAN	808.0000	255.00	204.00	219.33	99.00	30.67
1976	3299.00	991	851	1093	297	67
MEAN	1099.667	330.33	283.67	364.33	99.00	22.33
1977	3262.00	1038	933	898	202	191
MEAN	1087.333	346.00	311.00	299.33	67.33	63.67
1978	3340.00	1074	876	928	206	256
MEAN	1113.333	358.00	292.00	309.33	68.67	85.33
1979	3423.00	1145	912	916	178	272
MEAN	1141.000	381.67	304.00	305.33	59.33	90.67
1980	3556.00	1169	945	971	139	332
MEAN	1185.333	389.67	315.00	323.67	46.33	110.67
1981	3496.00	1182	984	865	119	346
MEAN	1165.333	394.00	328.00	288.33	39.67	115.33
1982	3475.00	1224	1022	764	101	364
MEAN	1158.333	408.00	340.67	254.67	33.67	121.33

North Carolina

Research/Doctorate
(sums are shown for each year, followed by mean for the year)

YEAR	FACULTY TOTAL	PROFESSOR	ASSOCIATE	ASSISTANT	INSTRUCTOR	OTHER
1957	905.00	205	180	354	142	24
MEAN	226.2500	51.25	45.00	88.50	35.50	6.00
1958	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1969	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1970	1098.00	220	256	426	176	20
MEAN	274.5000	55.00	64.00	106.50	44.00	5.00
1971	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1972	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1973	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1974	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1975	1589.00	264	402	728	174	21
MEAN	317.8000	52.80	80.40	145.60	34.80	4.20
1976	2275.00	409	557	967	313	29
MEAN	325.0000	58.43	79.57	138.14	44.71	4.14
1977	2328.00	426	594	985	300	23
MEAN	332.5714	60.86	84.86	140.71	42.86	3.29
1978	2266.00	453	591	953	242	27
MEAN	323.7143	64.71	84.43	136.14	34.57	3.86
1979	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1980	2379.00	494	695	893	278	19
MEAN	339.8571	70.57	99.29	127.57	39.71	2.71
1981	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1982	2458.00	559	775	844	262	18
MEAN	351.1429	79.86	110.71	120.57	37.43	2.57

Virginia

Graduate Degree Granting
(sums are shown for each year, followed by mean for the year)

YEAR	FACULTY TOTAL	PROFESSOR	ASSOCIATE	ASSISTANT	INSTRUCTOR	OTHER
1967	1745.00	332	347	556	464	46
MEAN	249.2857	47.43	49.57	79.43	66.29	6.57
1968	1790.00	351	339	606	455	39
MEAN	298.3333	58.50	56.50	101.00	75.83	6.50
1969	1680.00	324	297	629	388	42
MEAN	336.0000	64.80	59.40	125.80	77.60	8.40
1970	1674.00	327	354	636	354	3
MEAN	334.8000	65.40	70.80	127.20	70.80	.60
1971	1904.00	359	401	779	344	21
MEAN	317.3333	59.83	66.83	129.83	57.33	3.50
1972	1933.00	372	448	777	334	2
MEAN	322.1667	62.00	74.67	129.50	55.67	.33
1973	1928.00	372	460	751	300	45
MEAN	321.3333	62.00	76.67	125.17	50.00	7.50
1974	2114.00	413	526	795	340	40
MEAN	352.3333	68.83	87.67	132.50	56.67	6.67
1975	2179.00	437	569	796	290	87
MEAN	363.1667	72.83	94.83	132.67	48.33	14.50
1976	2217.00	501	591	789	256	70
MEAN	369.5000	83.50	98.50	131.50	44.33	11.67
1977	2417.00	571	664	783	241	158
MEAN	402.8333	95.17	110.67	130.50	40.17	26.33
1978	3567.00	613	1773	792	206	183
MEAN	509.5714	87.57	253.29	113.14	29.43	26.14
1979	2326.00	567	685	697	187	190
MEAN	387.6667	94.50	114.17	116.17	31.17	31.67
1980	2725.00	756	773	803	195	198
MEAN	389.2857	108.00	110.43	114.71	27.86	28.29
1981	2710.00	698	800	806	180	226
MEAN	387.1429	99.71	114.29	115.14	25.71	32.29
1982	3399.00	830	978	1059	224	308
MEAN	283.2500	69.17	81.50	88.25	18.67	25.67

North Carolina

Graduate Degree Granting
(sums are shown for each year, followed by mean for the year)

YEAR	FACULTY TOTAL	PROFESSOR	ASSOCIATE	ASSISTANT	INSTRUCTOR	OTHER
1967	619.00	147	117	194	140	21
MEAN	123.8000	29.40	23.40	38.80	28.00	4.20
1968	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1969	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1970	906.00	177	198	328	182	21
MEAN	129.4286	25.29	28.29	46.86	26.00	3.00
1971	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1972	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1973	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1974	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1975	721.00	175	166	271	102	7
MEAN	144.2000	35.00	33.20	54.20	20.40	1.40
1976	364.00	101	99	144	18	2
MEAN	91.0000	25.25	24.75	36.00	4.50	.50
1977	370.00	105	114	120	29	2
MEAN	92.5000	26.25	28.50	30.00	7.25	.50
1978	466.00	116	118	206	26	0
MEAN	116.5000	29.00	29.50	51.50	6.50	0.00
1979	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1980	363.00	127	110	100	24	2
MEAN	90.7500	31.75	27.50	25.00	6.00	.50
1981	.	.	.	.	.	.
MEAN	.	.	.	.	.	.
1982	375.00	134	113	106	19	3
MEAN	93.7500	33.50	28.25	26.50	4.75	.75

Virginia

Predominantly Undergraduate
(sums are shown for each year, followed by mean for the year)

YEAR	FACULTY TOTAL	PROFESSOR	ASSOCIATE	ASSISTANT	INSTRUCTOR	OTHER
1967	482.00	84	70	156	156	16
MEAN	80.3333	14.00	11.67	26.00	26.00	2.67
1968	567.00	104	115	178	163	7
MEAN	81.0000	14.86	16.43	25.43	23.29	1.00
1969	628.00	135	119	201	171	2
MEAN	89.7143	19.29	17.00	28.71	24.43	.29
1970	743.00	154	161	234	186	8
MEAN	106.1429	22.00	23.00	33.43	26.57	1.14
1971	606.00	133	129	198	128	18
MEAN	101.0000	22.17	21.50	33.00	21.33	3.00
1972	596.00	114	128	223	125	6
MEAN	99.3333	19.00	21.33	37.17	20.83	1.00
1973	589.00	116	118	225	126	4
MEAN	98.1667	19.33	19.67	37.50	21.00	.67
1974	622.00	117	122	234	140	9
MEAN	103.6667	19.50	20.33	39.00	23.33	1.50
1975	673.00	119	128	247	170	9
MEAN	112.1667	19.83	21.33	41.17	28.33	1.50
1976	709.00	109	149	274	137	40
MEAN	118.1667	18.17	24.83	45.67	22.83	6.67
1977	749.00	123	141	305	128	52
MEAN	124.8333	20.50	23.50	50.83	21.33	8.67
1978	648.00	105	114	280	98	51
MEAN	129.6000	21.00	22.80	56.00	19.60	10.20
1979	793.00	139	153	331	110	60
MEAN	132.1667	23.17	25.50	55.17	18.33	10.00
1980	694.00	130	132	288	94	50
MEAN	138.8000	26.00	26.40	57.60	18.80	10.00
1981	715.00	128	155	274	101	57
MEAN	143.0000	25.60	31.00	54.80	20.20	11.40

North Carolina

Predominantly Undergraduate
(sums are shown for each year, followed by mean for the year)

YEAR	PROFESSIONAL PROGRAMS	GRADUATE PROGRAMS	ACCEPTANCES TO APPLICATIONS	TUITION	APPROPRIATION PER INSTITUTION
1967 MEAN	2.00	72.25	.4956	173.25	11.42
1968 MEAN	1.33	58.67	.5676	174.33	15.96
1969 MEAN	2.00	82.25	.5522	473.75	17.22
1970 MEAN	.50	81.00	.5169	551.50	20.98
1971 MEAN	2.00	92.50	.5538	573.25	23.59
1972 MEAN	2.00	91.75	.5034	.	39.33
1973 MEAN	1.75	94.50	.6234	658.75	30.76
1974 MEAN	1.75	97.25	.5967	735.75	50.93
1975 MEAN	1.75	72.50	.	754.25	.
1976 MEAN	1.75	98.00	.5404	578.25	36.14
1977 MEAN	1.50	81.25	.5364	626.75	44.86
1978 MEAN	1.75	99.25	.5577	654.25	82.35
1979 MEAN	1.75	99.25	.5541	673.00	65.16
1980 MEAN	1.50	77.50	.5550	701.50	99.57
1981 MEAN	1.00	91.00	.5366	785.75	73.99
1982 MEAN		91.00	.4904	935.50	115.55

Virginia
Research/Doctorate

YEAR	PROFESSIONAL PROGRAMS	GRADUATE PROGRAMS	ACCEPTANCES_TO APPLICATIONS	TUITION	APPROPRIATION PER_INSTITUTION
1967 MEAN	1.50	.	.	175.00	17.62
1968 MEAN	1.50	117.00	.	347.00	19.97
1969 MEAN	1.50	.	.5827	357.00	25.11
1970 MEAN	1.00	.	.7179	423.33	21.27
1971 MEAN	1.00	.	.7107	426.67	25.44
1972 MEAN	1.00	.	.7228	435.33	27.74
1973 MEAN	1.00	.	.7503	466.67	30.52
1974 MEAN	1.00	161.33	.6014	483.00	27.09
1975 MEAN	1.00	161.33	.6364	505.33	28.87
1976 MEAN	1.33	164.33	.6686	508.67	41.70
1977 MEAN	1.33	166.67	.6360	554.00	47.61
1978 MEAN	1.33	163.67	.6425	562.33	51.28
1979 MEAN	1.33	167.00	.6478	587.00	58.54
1980 MEAN	1.33	169.33	.6282	602.33	65.74
1981 MEAN	1.67	162.00	.6192	696.00	75.33
1982 MEAN	1.67	164.67	.6220	709.33	82.00

North Carolina
Research/Doctorate

YEAR	PROFESSIONAL PROGRAMS	GRADUATE PROGRAMS	ACCEPTANCES_TO APPLICATIONS	TUITION	APPROPRIATION PER_INSTITUTION
1967 MEAN	0.00	18.00	.7968	191.75	2.26
1968 MEAN	.80	44.40	.7033	186.40	5.11
1969 MEAN	0.00	29.00	.7875	468.50	3.42
1970 MEAN	0.00	26.50	.6733	543.00	4.08
1971 MEAN	0.00	24.80	.8283	558.60	4.14
1972 MEAN	0.00	25.80	.7871	.	9.96
1973 MEAN	0.00	26.20	.8069	583.20	5.19
1974 MEAN	0.00	27.60	.8506	684.60	13.96
1975 MEAN	0.00	22.00	.	706.50	.
1976 MEAN	0.00	20.43	.8115	552.00	7.90
1977 MEAN	0.00	20.57	.7747	573.43	8.65
1978 MEAN	0.00	22.29	.7618	607.29	22.39
1979 MEAN	0.00	15.57	.7566	612.00	13.39
1980 MEAN	.11	20.57	.7339	630.57	29.00
1981 MEAN	0.00	17.86	.7349	706.86	16.11
1982 MEAN		17.86	.7027	796.43	37.83

Virginia

Graduate Degree Granting

YEAR	PROFESSIONAL PROGRAMS	GRADUATE PROGRAMS	ACCEPTANCES_TO APPLICATIONS	TUITION	APPROPRIATION PER_INSTITUTION
1967 MEAN	.11	.	.	160.86	3.60
1968 MEAN	.17	23.83	.	353.67	4.27
1969 MEAN	.17	.	.7070	374.50	6.12
1970 MEAN	.20	.	.7202	434.60	5.80
1971 MEAN	.17	.	.8276	432.17	5.10
1972 MEAN	.17	.	.7626	450.00	5.63
1973 MEAN	.17	.	.8085	440.50	7.38
1974 MEAN	.17	36.83	.8126	461.33	10.43
1975 MEAN	.17	36.17	.7820	487.00	11.67
1976 MEAN	.17	38.50	.7942	487.67	13.16
1977 MEAN	.17	39.17	.7617	532.83	15.86
1978 MEAN	.14	33.14	.7794	533.57	15.79
1979 MEAN	.17	40.17	.7627	562.83	19.70
1980 MEAN	.14	35.86	.7906	594.43	19.93
1981 MEAN	.14	36.57	.8228	649.71	23.24
1982 MEAN	.08	23.00	.8579	653.92	18.28

North Carolina
Graduate Degree Granting

YEAR	PROFESSIONAL PROGRAMS	GRADUATE PROGRAMS	ACCEPTANCES_TO APPLICATIONS	TUITION	APPROPRIATION PER_INSTITUTION
1967 MEAN	0.00	1.20	.6319	196.25	1.29
1968 MEAN	0.00	1.20	.7177	198.75	1.66
1969 MEAN	0.00	1.00	.7594	484.50	1.66
1970 MEAN	0.00	1.29	.8280	511.86	1.82
1971 MEAN	0.00	1.00	.8496	537.00	2.01
1972 MEAN	0.00	1.00	.8674	.	4.77
1973 MEAN	0.00	.67	.8766	648.67	2.49
1974 MEAN	0.00	1.00	.8734	687.50	6.32
1975 MEAN	0.00	.40	.	677.00	.
1976 MEAN	0.00	0.00	.8701	582.00	2.29
1977 MEAN	0.00	.25	.8558	617.00	2.49
1978 MEAN	0.00	0.00	.7182	634.50	5.79
1979 MEAN	0.00	0.00	.8678	654.50	3.88
1980 MEAN	0.00	.25	.8226	707.00	8.42
1981 MEAN	0.00	0.00	.7836	755.75	4.66
1982 MEAN	.	0.00	.7714	843.00	9.96

Virginia

Predominantly Undergraduate

YEAR	PROFESSIONAL PROGRAMS	GRADUATE PROGRAMS	ACCEPTANCES_TO APPLICATIONS	TUITION	APPROPRIATION PER_INSTITUTION
1967 MEAN	0.00	.	.	171.50	1.22
1968 MEAN	0.00	.	.	297.29	1.27
1969 MEAN	0.00	.	.6162	316.71	1.74
1970 MEAN	0.00	.	.6754	376.29	1.72
1971 MEAN	0.00	.	.7013	395.00	1.78
1972 MEAN	0.00	.	.8065	438.17	2.04
1973 MEAN	0.00	.	.8228	438.50	2.31
1974 MEAN	0.00	0.00	.8077	458.00	3.20
1975 MEAN	0.00	0.00	.8244	479.33	3.57
1976 MEAN	0.00	0.00	.7568	479.33	4.03
1977 MEAN	0.00	.67	.7688	506.00	4.94
1978 MEAN	0.00	.60	.8467	509.60	5.55
1979 MEAN	0.00	1.50	.8222	514.50	6.18
1980 MEAN	0.00	1.40	.8464	543.20	6.97
1981 MEAN	0.00	1.80	.8488	617.80	7.96

North Carolina

Predominantly Undergraduate

APPENDIX H

INSTITUTIONAL COMPARISONS OF RATIOS BY PRIMARY MISSION, STATE AND YEAR

YEAR	DEGREE TOTALS	PERCENTAGE OF_DOCTORAL	PERCENTAGE OF_PROFESSIONAL	PERCENTAGE OF_MASTERS
1967	5117.00			
MEAN	1705.667	.0355	.0617	.2454
1968	4794.00			
MEAN	1598.000	.0165	.0331	.1669
1969	8034.00			
MEAN	2008.500	.0306	.0585	.2213
1970	8810.00			
MEAN	2202.500	.0336	.0655	.2266
1971	9513.00			
MEAN	2378.250	.0296	.0662	.2289
1972	10277.00			
MEAN	2569.250	.0272	.0776	.2484
1973	11380.00			
MEAN	2845.000	.0313	.0753	.2429
1974	.	.	.	.
MEAN	.	.	.	.
1975	12938.00			
MEAN	3234.500	.0310	.0699	.2596
1976	12821.00			
MEAN	3205.250	.0320	.0734	.2504
1977	13390.00			
MEAN	3347.500	.0321	.0718	.2559
1978	13261.00			
MEAN	3315.250	.0324	.0734	.2298
1979	13550.00			
MEAN	3387.500	.0318	.0722	.2311
1980	13635.00			
MEAN	3408.750	.0331	.0737	.2399
1981	13856.00			
MEAN	3464.000	.0329	.0756	.2268
1982	14181.00			
MEAN	3545.250	.0367	.0742	.2258

Virginia
Research/Doctorate

YEAR	DEGREE TOTALS	PERCENTAGE OF_DOCTORAL	PERCENTAGE OF_PROFESSIONAL	PERCENTAGE OF_MASTERS
1967	5228.00			
MEAN	2614.000	.0599	.0356	.2120
1968	6334.00			
MEAN	3167.000	.0607	.0321	.2304
1969	6481.00			
MEAN	3240.500	.0641	.0258	.2243
1970	8137.00			
MEAN	2712.333	.0529	.0211	.2311
1971	8486.00			
MEAN	2828.667	.0514	.0224	.2078
1972	8970.00			
MEAN	2990.000	.0540	.0255	.2005
1973	9309.00			
MEAN	3103.000	.0544	.0296	.2163
1974	9268.00			
MEAN	3089.333	.0513	.0204	.2255
1975	9636.00			
MEAN	3212.000	.0489	.0283	.2175
1976	8026.00			
MEAN	2675.333	.0715	.0267	.3549
1977	10323.00			
MEAN	3441.000	.0444	.0276	.2252
1978	11004.00			
MEAN	3668.000	.0479	.0281	.2144
1979	9949.00			
MEAN	3316.333	.0478	.0301	.2344
1980	10287.00			
MEAN	3429.000	.0447	.0269	.2267
1981	10454.00			
MEAN	3484.667	.0477	.0299	.2223
1982	10886.00			
MEAN	3628.667	.0460	.0300	.2199

North Carolina
Research/Doctorate

INSTITUTIONAL COMPARISONS OF RATIOS
BY PRIMARY MISSION STATE AND YEAR

YEAR	PERCENTAGE OF_BACCALAURATE	PERCENTAGE OF_OTHERS
1957 MEAN	.6574	0.00
1958 MEAN	.7643	.0191
1959 MEAN	.6770	.0125
1970 MEAN	.6627	.0115
1971 MEAN	.6646	.0107
1972 MEAN	.6369	.0100
1973 MEAN	.6464	.0042
1974 MEAN	.	.
1975 MEAN	.6372	.0022
1976 MEAN	.5400	.0043
1977 MEAN	.6374	.0028
1978 MEAN	.6621	.0023
1979 MEAN	.6641	.0007
1980 MEAN	.6510	.0023
1981 MEAN	.6636	.0011
1982 MEAN	.5561	.0072

Virginia

YEAR	PERCENTAGE OF_BACCALAURATE	PERCENTAGE OF_OTHERS
1957 MEAN	.6925	0.00
1958 MEAN	.6768	0.00
1959 MEAN	.6858	0.00
1970 MEAN	.6949	0.00
1971 MEAN	.7185	0.00
1972 MEAN	.7200	0.00
1973 MEAN	.6998	0.00
1974 MEAN	.7028	0.00
1975 MEAN	.7052	0.00
1976 MEAN	.5469	0.00
1977 MEAN	.7029	0.00
1978 MEAN	.7096	0.00
1979 MEAN	.6877	0.00
1980 MEAN	.7017	0.00
1981 MEAN	.7000	0.00
1982 MEAN	.7041	0.00

North Carolina

Research/Doctoral

YEAR	DEGREE TOTALS	PERCENTAGE OF_DOCTORAL	PERCENTAGE OF_PROFESSIONAL	PERCENTAGE OF_MASTERS
1967	2222.00			
MEAN	555.5000	0.00	0.00	.1231
1968	5496.00			
MEAN	1099.200	.0124	.0239	.1632
1969	3690.00			
MEAN	922.5000	.1250	0.00	.1226
1970	3731.00			.75
MEAN	932.7500	0.00	0.00	.1905
1971	4630.00			
MEAN	926.0000	0.00	0.00	.1893
1972	4878.00			
MEAN	975.6000	0.00	0.00	.1921
1973	5531.00			
MEAN	1106.200	0.00	0.00	.2067
1974	.			
MEAN	.	.	.	.
1975	7028.00			
MEAN	1171.333	.0001	0.00	.2137
1976	8039.00			
MEAN	1148.429	.0003	0.00	.1899
1977	8490.00			
MEAN	1212.857	.0003	0.00	.1941
1978	8533.00			
MEAN	1219.000	.0003	.0027	.1768
1979	8508.00			
MEAN	1215.429	.0003	.0034	.1973
1980	9309.00			
MEAN	1329.857	.0004	.0255	.1918
1981	9358.00			
MEAN	1336.857	.0004	.0108	.1935
1982	9356.00			
MEAN	1336.571	.0004	.0102	.1798

Virginia
Graduate Degree Granting

YEAR	DEGREE TOTALS	PERCENTAGE OF_DOCTORAL	PERCENTAGE OF_PROFESSIONAL	PERCENTAGE OF_MASTERS
1967	5481.00			
MEAN	783.0000	.0003	.0022	.1835
1968	6302.00			
MEAN	1050.333	.0010	.0077	.1915
1969	6895.00			
MEAN	1149.167	.0004	.0055	.1778
1970	6074.00			
MEAN	1214.800	0.00	.0056	.1787
1971	7369.00			
MEAN	1228.167	0.00	.0077	.1809
1972	8180.00			
MEAN	1363.333	0.00	.0110	.1950
1973	8584.00			
MEAN	1430.667	0.00	.0123	.2166
1974	8644.00			
MEAN	1440.667	0.00	.0165	.2120
1975	9229.00			
MEAN	1538.167	0.00	.0195	.2474
1976	9588.00			
MEAN	1598.000	0.00	.0082	.2855
1977	9721.00			
MEAN	1620.167	0.00	.0101	.2815
1978	9900.00			
MEAN	1414.286	0.00	.0085	.2358
1979	9558.00			
MEAN	1593.000	0.00	.0095	.2365
1980	9628.00			
MEAN	1375.429	0.00	.0136	.2154
1981	9909.00			
MEAN	1415.571	0.00	.0019	.2312
1982	11510.00			
MEAN	959.1667	.0000	.0071	.1452

North Carolina

Graduate Degree Granting

INSTITUTIONAL COMPARISONS OF RATIOS
BY PRIMARY MISSION STATE AND YEAR

YEAR	PERCENTAGE OF_BACCALAURATE	PERCENTAGE OF_OTHERS
1967 MEAN	.8609	.0160
1968 MEAN	.7822	.0184
1969 MEAN	.7389	.0135
1970 MEAN	.7985	.0110
1971 MEAN	.8015	.0092
1972 MEAN	.7971	.0108
1973 MEAN	.7875	.0058
1974 MEAN	.	.
1975 MEAN	.7833	.0029
1976 MEAN	.7987	.0111
1977 MEAN	.7949	.0108
1978 MEAN	.8103	.0098
1979 MEAN	.7922	.0067
1980 MEAN	.7733	.0090
1981 MEAN	.7953	0.00
1982 MEAN	.8015	.0081

Virginia

YEAR	PERCENTAGE OF_BACCALAURATE	PERCENTAGE OF_OTHERS
1967 MEAN	.8141	0.00
1968 MEAN	.7998	0.00
1969 MEAN	.8162	0.00
1970 MEAN	.8157	0.00
1971 MEAN	.8114	0.00
1972 MEAN	.7940	0.00
1973 MEAN	.7711	0.00
1974 MEAN	.7715	0.00
1975 MEAN	.7330	0.00
1976 MEAN	.7063	0.00
1977 MEAN	.7083	0.00
1978 MEAN	.7556	0.00
1979 MEAN	.7539	0.00
1980 MEAN	.7710	0.00
1981 MEAN	.7669	0.00
1982 MEAN	.8449	.0028

North Carolina

Graduate Degree Granting

INSTITUTIONAL COMPARISO
BY PRIMARY MISSION STA

YEAR	DEGREE TOTALS	PERCENTAGE OF_DOCTORAL	PERCENTAGE OF_PROFESSIONAL	PERCENTAGE OF_MASTERS
1967	1443.00			
MEAN	288.6000	0.00	0.00	.0078
1968	1601.00			
MEAN	320.2000	0.00	0.00	.0187
1969	1800.00			
MEAN	300.0000	0.00	0.00	.0073
1970	2112.00			
MEAN	301.7143	0.00	0.00	.0110
1971	1820.00			
MEAN	303.3333	0.00	0.00	.0089
1972	2089.00			
MEAN	348.1667	0.00	0.00	.0133
1973	2270.00			
MEAN	378.3333	0.00	0.00	.0099
1974				
MEAN	.	.	.	.
1975	1889.00			
MEAN	377.8000	0.00	0.00	.0029
1976	1106.00			
MEAN	276.5000	0.00	0.00	0.00
1977	1112.00			
MEAN	278.0000	0.00	0.00	0.00
1978	1184.00			
MEAN	296.0000	0.00	0.00	0.00
1979	1212.00			
MEAN	303.0000	0.00	0.00	0.00
1980	1180.00			
MEAN	295.0000	0.00	0.00	0.00
1981	1244.00			
MEAN	311.0000	0.00	0.00	0.00
1982	1246.00			
MEAN	311.5000	0.00	0.00	.0029

Virginia

Predominantly Undergraduate

YEAR	DEGREE TOTALS	PERCENTAGE OF_DOCTORAL	PERCENTAGE OF_PROFESSIONAL	PERCENTAGE OF_MASTERS
1967	885.00			
MEAN	147.5000	0.00	0.00	0.00
1968	1440.00			
MEAN	205.7143	0.00	0.00	0.00
1969	1667.00			
MEAN	238.1429	0.00	0.00	.0001
1970	2013.00			
MEAN	287.5714	0.00	0.00	.0055
1971	1542.00			
MEAN	257.0000	0.00	0.00	0.00
1972	1714.00			
MEAN	285.6667	0.00	0.00	0.00
1973	1863.00			
MEAN	310.5000	0.00	0.00	0.00
1974	1977.00			
MEAN	329.5000	0.00	0.00	0.00
1975	2008.00			
MEAN	334.6667	0.00	0.00	0.00
1976	2089.00			
MEAN	348.1667	0.00	0.00	0.00
1977	2204.00			
MEAN	367.3333	0.00	0.00	0.00
1978	1745.00			
MEAN	349.0000	0.00	0.00	.0011
1979	2068.00			
MEAN	344.6667	0.00	0.00	.0108
1980	1574.00			
MEAN	314.8000	0.00	0.00	.0093
1981	1667.00			
MEAN	333.4000	0.00	0.00	.0108

North Carolina
Predominantly Undergraduate

INSTITUTIONAL COMPARISONS OF RATIOS
BY PRIMARY MISSION STATE AND YEAR

YEAR	PERCENTAGE OF_BACCALAURATE	PERCENTAGE OF_OTHERS	YEAR	PERCENTAGE OF_BACCALAURATE	PERCENTAGE OF_OTHERS
1967 MEAN	.9773	.0149	1967 MEAN	1.0000	0.00
1968 MEAN	.9660	.0153	1968 MEAN	1.0000	0.00
1969 MEAN	.9794	.0133	1969 MEAN	.9996	0.00
1970 MEAN	.9274	.0616	1970 MEAN	.9945	0.00
1971 MEAN	.9630	.0282	1971 MEAN	1.0000	0.00
1972 MEAN	.9604	.0263	1972 MEAN	1.0000	0.00
1973 MEAN	.9666	.0236	1973 MEAN	1.0000	0.00
1974 MEAN	.	.	1974 MEAN	1.0000	0.00
1975 MEAN	.9704	.0267	1975 MEAN	1.0000	0.00
1976 MEAN	.9870	.0130	1976 MEAN	1.0000	0.00
1977 MEAN	.9867	.0133	1977 MEAN	1.0000	0.00
1978 MEAN	1.0000	0.00	1978 MEAN	.9989	0.00
1979 MEAN	.9915	.0085	1979 MEAN	.9892	0.00
1980 MEAN	.9873	.0127	1980 MEAN	.9907	0.00
1981 MEAN	.9695	.0305	1981 MEAN	.9892	0.00
1982 MEAN	.9971	0.00			

Virginia

North Carolina

Predominantly Undergraduate

INSTITUTIONAL COMPARISONS OF RATIOS
BY PRIMARY MISSION STATE AND YEAR

YEAR	FACULTY_TO STUDENT_RATIO	APPROPRIATIONS BY_POPULATION	FTE_ENROLLMENT BY_APPROPRIATIONS
1967 MEAN	.0866	44:3879	686:0459
1968 MEAN	.0947	46:9468	678:0075
1969 MEAN	.1180	61:0852	529:9189
1970 MEAN	.0820	50:8844	589:9728
1971 MEAN	.0934	58:6283	524:6204
1972 MEAN	.0887	62:9033	496:7550
1973 MEAN	.0697	68.1302	485:5701
1974 MEAN	.0594	59:5443	497:9880
1975 MEAN	.0578	62:4812	498:0530
1976 MEAN	.0747	88:9055	377:2584
1977 MEAN	.0731	101.9515	338:6559
1978 MEAN	.0747	108:1800	316:2888
1979 MEAN	.0742	121:7027	287:8053
1980 MEAN	.0739	136:7602	263:7733
1981 MEAN	.0724	.	235.1429
1982 MEAN	.0711	.	219:1800

North Carolina

YEAR	FACULTY_TO STUDENT_RATIO	APPROPRIATIONS BY_POPULATION	FTE_ENROLLMENT BY_APPROPRIATIONS
1967 MEAN	.0653	33:6792	782:9552
1968 MEAN	.	46:1329	530:3796
1969 MEAN	.	48:7720	584:5595
1970 MEAN	.0763	58:2639	495:0425
1971 MEAN	.	54:6019	519:4428
1972 MEAN	.	90.2159	311:2971
1973 MEAN	.	68:9731	413:4259
1974 MEAN	.	112.4249	247:2477
1975 MEAN	.0571	.	.
1976 MEAN	.0588	77.3833	394:7362
1977 MEAN	.0592	94:6450	336:6885
1978 MEAN	.0616	171:2006	172:7324
1979 MEAN	.	154:8278	237:5721
1980 MEAN	.0611	232:6466	145:5531
1981 MEAN	.	172:8797	215:6433
1982 MEAN	.0480	269:9761	130:8140

Virginia
Research/Doctoral

INSTITUTIONAL COMPARISONS OF RATIOS
BY PRIMARY MISSION STATE AND YEAR

YEAR	FACULTY_TO STUDENT_RATIO	APPROPRIATIONS BY_POPULATION	FTE_ENROLLMENT BY_APPROPRIATIONS
1957 MEAN	.0587	9:5624	1156:5235
1958 MEAN	.0602	10:5792	1243:7614
1959 MEAN	.0706	14:8982	836:4569
1970 MEAN	.0628	13:8837	938:6433
1971 MEAN	.0619	14:0576	874:7861
1972 MEAN	.0567	15:0389	864:9829
1973 MEAN	.0557	16:4695	796:5420
1974 MEAN	.0564	22:9136	597:4772
1975 MEAN	.0545	25:2605	578:4036
1976 MEAN	.0529	28:1679	526:5525
1977 MEAN	.0576	33.9565	441:1354
1978 MEAN	.0781	33:3026	398:9728
1979 MEAN	.0539	40:9653	372:1875
1980 MEAN	.0579	40:8457	339:2243
1981 MEAN	.0580	.	300.3992
1982 MEAN	.0585	.	277:8422

North Carolina

YEAR	FACULTY_TO STUDENT_RATIO	APPROPRIATIONS BY_POPULATION	FTE_ENROLLMENT BY_APPROPRIATIONS
1967 MEAN	.0607	6.6637	1958:9507
1968 MEAN	.	17:6647	1292:8991
1969 MEAN	.	9:6877	1359:9714
1970 MEAN	.0652	11:3250	1056:2441
1971 MEAN	.	9:5778	1082:0028
1972 MEAN	.	22:7518	506:6035
1973 MEAN	.	11:6323	929:6489
1974 MEAN	.	30:8256	393:6494
1975 MEAN	.0537	.	.
1976 MEAN	.0597	16:9101	709:9852
1977 MEAN	.0562	18:2541	709:7310
1978 MEAN	.0549	50.5543	276:3097
1979 MEAN	.	31:7965	491:5083
1980 MEAN	.0526	67:7593	229.4019
1981 MEAN	.	37:6472	420:8204
1982 MEAN	.0541	88:3772	176:2249

Virginia

INSTITUTIONAL COMPARISONS OF RATIOS
BY PRIMARY MISSION STATE AND YEAR

YEAR	FACULTY_TO STUDENT_RATIO	APPROPRIATIONS BY_POPULATION	FTE_ENROLLMENT BY_APPROPRIATIONS
1967 MEAN	.0718	3:0802	953:9743
1968 MEAN	.0658	3.1513	1012:2895
1969 MEAN	.0672	4:2364	797:7957
1970 MEAN	.0712	4.1183	875:3938
1971 MEAN	.0707	4.1045	813:8791
1972 MEAN	.0645	4.6361	746:2302
1973 MEAN	.0629	5:1629	681:9325
1974 MEAN	.0629	7:0315	514:3723
1975 MEAN	.0588	7.7186	530:9570
1976 MEAN	.0612	8:5903	476:3595
1977 MEAN	.0609	10.5824	407:2402
1978 MEAN	.0638	11:7177	358:0085
1979 MEAN	.0630	12:8534	334.5252
1980 MEAN	.0630	14:2811	315:1472
1981 MEAN	.0604	.	291:9155

North Carolina

YEAR	FACULTY_TO STUDENT_RATIO	APPROPRIATIONS BY_POPULATION	FTE_ENROLLMENT BY_APPROPRIATIONS
1967 MEAN	.0563	3:8177	1978:9255
1968 MEAN	.	4:8052	1379:1977
1969 MEAN	.	4:7092	1321:8927
1970 MEAN	.0640	5:0659	1225:5019
1971 MEAN	.	4:6435	1209:7516
1972 MEAN	.	10:8702	486:3919
1973 MEAN	.	5:5785	864:4644
1974 MEAN	.	13:9581	357:9503
1975 MEAN	.0613	.	.
1976 MEAN	.0573	4:9074	699:0156
1977 MEAN	.0552	5:2574	676.8147
1978 MEAN	.0567	15:7071	343:6989
1979 MEAN	.	9:2209	425.6598
1980 MEAN	.0538	19:6735	200.5510
1981 MEAN	.	10:8984	372:2438
1982 MEAN	.0520	23.2722	181:5139

Virginia

YEAR	FACULTY TOTAL	PERCENTAGE OF_PROFESSORS	PERCENTAGE OF_ASSOCIATES	PERCENTAGE OF_ASSISTANTS
1967	619.00			
MEAN	123.8000	.2250	.1815	.3336
1968				
MEAN	.	.	.	.
1969				
MEAN	.	.	.	.
1970	906.00			
MEAN	129.4286	.1816	.2078	.3869
1971				
MEAN	.	.	.	.
1972				
MEAN	.	.	.	.
1973				
MEAN	.	.	.	.
1974				
MEAN	.	.	.	.
1975	721.00			
MEAN	144.2000	.2541	.2369	.4225
1976	364.00			
MEAN	91.0000	.2694	.2735	.4111
1977	370.00			
MEAN	92.5000	.2778	.3076	.3432
1978	466.00			
MEAN	116.5000	.2674	.2617	.4116
1979				
MEAN	.	.	.	.
1980	363.00			
MEAN	90.7500	.3438	.3120	.2812
1981				
MEAN	.	.	.	.
1982	375.00			
MEAN	93.7500	.3577	.2927	.2960

Virginia

Research/Doctorate

YEAR	FACULTY TOTAL	PERCENTAGE OF_PROFESSORS	PERCENTAGE OF_ASSOCIATES	PERCENTAGE OF_ASSISTANTS
1967	482.00			
MEAN	80.3333	.1860	.1520	.3208
1968	567.00			
MEAN	81.0000	.1859	.1986	.3195
1969	628.00			
MEAN	89.7143	.2177	.1883	.3256
1970	743.00			
MEAN	106.1429	.2111	.2145	.3169
1971	606.00			
MEAN	101.0000	.2159	.2140	.3299
1972	596.00			
MEAN	99.3333	.1918	.2153	.3830
1973	589.00			
MEAN	98.1667	.2023	.2023	.3827
1974	622.00			
MEAN	103.6667	.1923	.2021	.3727
1975	673.00			
MEAN	112.1667	.1856	.1961	.3687
1976	709.00			
MEAN	118.1667	.1615	.2153	.3772
1977	749.00			
MEAN	124.8333	.1716	.1945	.3977
1978	648.00			
MEAN	129.6000	.1685	.1872	.4145
1979	793.00			
MEAN	132.1667	.1797	.2034	.4046
1980	694.00			
MEAN	138.8000	.1957	.1985	.4048
1981	715.00			
MEAN	143.0000	.1876	.2238	.3701

North Carolina
Research/Doctorate

INSTITUTIONAL COMPARISONS OF RATIOS
BY PRIMARY MISSION STATE AND YEAR

YEAR	PERCENTAGE OF_INSTRUCTORS	PERCENTAGE OF_OTHERS	PERCANTAGE OF_POP_TO_HEAD
1967 MEAN	.2282	.0318	5827.1386
1968 MEAN	.	.	6032.9480
1969 MEAN	.	.	5759.2068
1970 MEAN	.1966	.0251	6489.2857
1971 MEAN	.	.	5443.6728
1972 MEAN	.	.	5541.3819
1973 MEAN	.	.	5521.3004
1974 MEAN	.	.	5559.2347
1975 MEAN	.0785	.0081	6081.3043
1976 MEAN	.0406	.0053	4099.0364
1977 MEAN	.0651	.0054	4223.6287
1978 MEAN	.0593	0.00	6355.9757
1979 MEAN	.	.	5045.7245
1980 MEAN	.0577	.0053	5116.8224
1981 MEAN	.	.	5239.4860
1982 MEAN	.0463	.0073	5445.0935

Virginia

YEAR	PERCENTAGE OF_INSTRUCTORS	PERCENTAGE OF_OTHERS	PERCANTAGE OF_POP_TO_HEAD
1967 MEAN	.3129	.0282	3092.3594
1968 MEAN	.2832	.0128	3343.7058
1969 MEAN	.2544	.0040	3683.3507
1970 MEAN	.2449	.0126	4332.8776
1971 MEAN	.2080	.0321	3575.6528
1972 MEAN	.1999	.0100	3726.7574
1973 MEAN	.2075	.0053	3784.9702
1974 MEAN	.2180	.0149	3998.9011
1975 MEAN	.2365	.0132	4545.4545
1976 MEAN	.1918	.0543	4528.7846
1977 MEAN	.1743	.0619	4832.2627
1978 MEAN	.1539	.0758	4486.0759
1979 MEAN	.1380	.0743	5002.7720
1980 MEAN	.1373	.0637	5314.7541
1981 MEAN	.1474	.0711	.

North Carolina

Research/Doctoral

YEAR	FACULTY TOTAL	PERCENTAGE OF_PROFESSORS	PERCENTAGE OF_ASSOCIATES	PERCENTAGE OF_ASSISTANTS
1967	905.00			
MEAN	226.2500	.2238	.1942	.4100
1968	.			
MEAN	.	.	.	.
1969	.			
MEAN	.	.	.	.
1970	1098.00			
MEAN	274.5000	.1985	.2341	.3960
1971	.			
MEAN	.	.	.	.
1972	.			
MEAN	.	.	.	.
1973	.			
MEAN	.	.	.	.
1974	.			
MEAN	.	.	.	.
1975	1589.00			
MEAN	317.8000	.1697	.2499	.4659
1976	2275.00			
MEAN	325.0000	.1770	.2437	.4292
1977	2328.00			
MEAN	332.5714	.1805	.2551	.4251
1978	2266.00			
MEAN	323.7143	.1995	.2664	.4226
1979	.			
MEAN	.	.	.	.
1980	2379.00			
MEAN	339.8571	.2074	.2864	.3847
1981	.			
MEAN	.	.	.	.
1982	2458.00			
MEAN	351.1429	.2256	.3068	.3505

Virginia

Graduate Degree Granting

YEAR	FACULTY TOTAL	PERCENTAGE OF_PROFESSORS	PERCENTAGE OF_ASSOCIATES	PERCENTAGE OF_ASSISTANTS
1967	1745.00			
MEAN	249.2857	.1877	.1915	.3093
1968	1790.00			
MEAN	298.3333	.1963	.1772	.3378
1969	1680.00			
MEAN	336.0000	.1995	.1702	.3559
1970	1674.00			
MEAN	334.8000	.1989	.2055	.3685
1971	1904.00			
MEAN	317.3333	.1876	.2077	.4069
1972	1933.00			
MEAN	322.1667	.1938	.2226	.4007
1973	1928.00			
MEAN	321.3333	.1889	.2347	.3848
1974	2114.00			
MEAN	352.3333	.1885	.2438	.3762
1975	2179.00			
MEAN	363.1667	.1985	.2519	.3[illegible]
1976	2217.00			
MEAN	369.5000	.2125	.2567	.3763
1977	2417.00			
MEAN	402.8333	.2218	.2727	.3444
1978	3667.00			
MEAN	509.5714	.2232	.3599	.2924
1979	2326.00			
MEAN	387.6667	.2370	.2954	.3104
1980	2725.00			
MEAN	389.2857	.2455	.2942	.3089
1981	2710.00			
MEAN	387.1429	.2439	.2980	.3037
1982	3399.00			
MEAN	283.2500	.2211	.2815	.3258

North Carolina

Graduate Degree Granting

INSTITUTIONAL COMPARISONS OF RATIOS
BY PRIMARY MISSION STATE AND YEAR

YEAR	PERCENTAGE OF_INSTRUCTORS	PERCENTAGE OF_OTHERS	PERCANTAGE OF_POP_TO_HEAD
1967 MEAN	.1502	.0218	13317;1091
1968 MEAN	.	.	16391;9075
1969 MEAN	.	.	13813;0312
1970 MEAN	.1554	.0160	14318;7500
1971 MEAN	.	.	11436;1111
1972 MEAN	.	.	12552;4734
1973 MEAN	.	.	13189;2377
1974 MEAN	.	.	14587;6380
1975 MEAN	.1062	.0082	14337.6812
1976 MEAN	.1416	.0085	14702;5614
1977 MEAN	.1320	.0063	15309;5238
1978 MEAN	.1039	.0076	16527;0649
1979 MEAN	.	.	18170;3427
1980 MEAN	.1168	.0048	18701.2684
1981 MEAN	.	.	19290;3872
1982 MEAN	.1119	.0052	19302;4032

Virginia

YEAR	PERCENTAGE OF_INSTRUCTORS	PERCENTAGE OF_OTHERS	PERCANTAGE OF_POP_TO_HEAD
1967 MEAN	.2889	.0225	11205;4696
1968 MEAN	.2710	.0178	13169.5545
1969 MEAN	.2456	.0288	13559.2052
1970 MEAN	.2258	.0013	13461.7225
1971 MEAN	.1906	.0072	13680;8756
1972 MEAN	.1821	.0006	13973;9229
1973 MEAN	.1507	.0309	14283;1101
1974 MEAN	.1642	.0255	15484.6154
1975 MEAN	.1386	.0445	15992;0635
1976 MEAN	.1326	.0219	15955.7562
1977 MEAN	.1116	.0495	16312;2769
1978 MEAN	.0981	.0364	14622.6643
1979 MEAN	.0916	.0652	16513;8600
1980 MEAN	.0877	.0637	15069.9649
1981 MEAN	.0812	.0732	.
1982 MEAN	.0822	.0894	.

North Carolina

Graduate Degree Granting

YEAR	FACULTY TOTAL	PERCENTAGE OF_PROFESSORS	PERCENTAGE OF_ASSOCIATES	PERCENTAGE OF_ASSISTANTS
1967	1852.00			
MEAN	463.0000	.2137	.2169	.3465
1968	.			
MEAN	.	.	.	.
1969	.			
MEAN	.	.	.	.
1970	2921.00			
MEAN	730.2500	.2503	.2714	.3370
1971	.			
MEAN	.	.	.	.
1972	.			
MEAN	.	.	.	.
1973	.			
MEAN	.	.	.	.
1974	.			
MEAN	.	.	.	.
1975	2825.00			
MEAN	706.2500	.2593	.2912	.3626
1976	2988.00			
MEAN	747.0000	.2487	.2973	.3634
1977	3269.00			
MEAN	817.2500	.2558	.3014	.3531
1978	3369.00			
MEAN	842.2500	.2769	.2986	.3402
1979	.			
MEAN	.	.	.	.
1980	3483.00			
MEAN	870.7500	.3021	.3102	.3130
1981	.			
MEAN	.	.	.	.
1982	2527.00			
MEAN	631.7500	.3262	.3204	.2853

Virginia

Predominantly Undergraduate

YEAR	FACULTY TOTAL	PERCENTAGE OF_PROFESSORS	PERCENTAGE OF_ASSOCIATES	PERCENTAGE OF_ASSISTANTS
1967	1907.00			
MEAN	953.5000	.2859	.2206	.2296
1968	2320.00			
MEAN	1160.000	.3129	.2725	.2652
1969	3010.00			
MEAN	1505.000	.2588	.2217	.2704
1970	2890.00			
MEAN	963.3333	.2672	.2423	.2859
1971	3490.00			
MEAN	1163.333	.2547	.2139	.2780
1972	3527.00			
MEAN	1175.667	.2386	.1872	.3078
1973	2793.00			
MEAN	931.0000	.2835	.2335	.3096
1974	2337.00			
MEAN	779.0000	.2927	.2409	.2886
1975	2424.00			
MEAN	808.0000	.2948	.2426	.2843
1976	3299.00			
MEAN	1099.667	.2825	.2518	.3328
1977	3262.00			
MEAN	1087.333	.2983	.2814	.2896
1978	3340.00			
MEAN	1113.333	.3027	.2605	.2880
1979	3423.00			
MEAN	1141.000	.3146	.2648	.2819
1980	3556.00			
MEAN	1185.333	.3178	.2647	.2809
1981	3496.00			
MEAN	1165.333	.3208	.2850	.2589
1982	3475.00			
MEAN	1158.333	.3345	.2995	.2316

North Carolina
Predominantly Undergraduate

INSTITUTIONAL COMPARISONS OF RATIOS
BY PRIMARY MISSION STATE AND YEAR

YEAR	PERCENTAGE OF_INSTRUCTORS	PERCENTAGE OF_OTHERS	PERCANTAGE OF_POP_TO_HEAD
1967 MEAN	.1902	.0326	22266.4700
1968 MEAN	.	.	26320.8092
1969 MEAN	.	.	27852.6912
1970 MEAN	.1238	.0175	29376.3889
1971 MEAN	.	.	26690.3935
1972 MEAN	.	.	28057.0310
1973 MEAN	.	.	29536.4350
1974 MEAN	.	.	30214.1280
1975 MEAN	.0794	.0075	31069.0217
1976 MEAN	.0816	.0091	31370.4497
1977 MEAN	.0787	.0110	31657.1730
1978 MEAN	.0744	.0099	31797.2973
1979 MEAN	.	.	36988.7173
1980 MEAN	.0650	.0098	36882.0093
1981 MEAN	.	.	37246.4953
1982 MEAN	.0596	.0086	37714.9533

Virginia

YEAR	PERCENTAGE OF_INSTRUCTORS	PERCENTAGE OF_OTHERS	PERCANTAGE OF_POP_TO_HEAD
1967 MEAN	.1266	.1373	33307.3048
1968 MEAN	.0837	.0656	34897.2772
1969 MEAN	.1580	.0911	35427.0073
1970 MEAN	.1539	.0477	30440.9888
1971 MEAN	.1444	.1091	30434.7158
1972 MEAN	.1765	.0900	30569.9169
1973 MEAN	.1368	.0365	30884.6726
1974 MEAN	.1300	.0478	32572.8938
1975 MEAN	.1386	.0397	34246.7532
1976 MEAN	.1138	.0191	33353.9446
1977 MEAN	.0857	.0451	34009.9929
1978 MEAN	.0887	.0601	34076.6526
1979 MEAN	.0757	.0630	34805.9598
1980 MEAN	.0593	.0772	36040.9836
1981 MEAN	.0510	.0843	.
1982 MEAN	.0431	.0914	.

North Carolina

Predominantly Undergraduate